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ABSTRACT

This conference report is a compilation of the presentations given at a national professional development seminar for State directors of vocational education and their key curriculum staff members to increase their knowledge regarding curriculum improvement in the following areas: Persons with special needs, dissemination and implementation processes, management information systems, and career education activities. The 17 conference papers are in seven sections and include the following: (1) Adapting Vocational Education Curricula to Meet the Needs of a Changing Society; Vocational Education Programs to Meet the Special Needs of Persons in Michigan; (2) Indiana Personnel Development for the Implementation of New Curriculum Ideas; Oregon's Personnel Development Approach; (3) Colorado's Management Information System Impacts upon Curriculum Decisions; Management Information Systems for Curriculum Improvement in Washington; Management Information Systems for Curriculum Improvement in Oklahoma; (4) Procedures for Implementing Curriculum Changes in Local Education Agencies; The Role of the State Vocational Agency in Curriculum Improvement for Local Education Agencies; (5) Goals and Mechanisms for Curriculum Development; An Industrial Approach to the Development of Instructional Systems; (6) Curriculum Status for Preparing State Personnel Development Supervisors; and (7) Leadership Responsibilities for Vocational Education in Career Education: A New Look; The Place of Vocational Education Preparation in Career Education; International Perspectives on Career Education. (EM)

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Seventh Annual National Leadership Development Seminar for State Directors of Vocational Education

Columbus, Ohio

September 24-26, 1974

IMPROVING VOCATIONAL CURRICULA IN LOCAL EDUCATION AGENCIES

Compiled and Edited
by
Daniel E. Koble, Jr.
and
James G. Bumstead

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THE CENTER MISSION STATEMENT

The Center for Vocational Education intends to increase the ability of diverse agencies, institutions, and organizations to solve educational problems relating to individual career planning and preparation. The Center fulfills its mission by:

- Generating knowledge through research
- Developing educational programs and products
- Evaluating individual program needs and outcomes
- Installing educational programs and products
- Operating information systems and services
- Conducting leadership development and training programs

Foreword

An important function of state vocational education agencies is the administration of federal and state vocational education programs and funds at the state and local education agency level. The Center for Vocational Education has recognized the importance of these functions by providing an opportunity for state agency personnel to share problems and ideas through a continuing series of national seminars.

The 1974 seminar for State Directors of Vocational Education focused on improvement of vocational curricula at the local education agency level. This theme proved to be a timely and valuable topic for state leaders. One hundred fifteen persons, representing forty-three state vocational units, one territory, and Washington, D.C. attended the seminar.

Special emphasis was given to processes and innovative concepts relating to professional development and self-improvement of state directors of vocational education and key members of their staffs in the area of curriculum activities. The seminar provided the participants with the unique opportunity to exchange ideas regarding this vital component of vocational education and to discuss common vocational education concerns. Guidelines and information papers were presented to explain and define methods that can be utilized by state vocational education personnel in discharging responsibilities in the field of curriculum improvement. The seminar was designed to increase the knowledge and awareness of participants regarding curriculum improvement in the following areas: persons with special needs, dissemination and implementation processes, management information systems, and career education activities. Contributions of nationally recognized authorities and the practical solutions to curricula problems formulated by participants and presenters are reflected in the conference report.

Recognition is due Daniel E. Koble, Jr., research specialist, and James G. Bumstead, research associate at The Center for their efforts in directing the seminar. An expression of appreciation is also in order for Center staff members Dallas Ator, Kenney Gray, William Petrie, Ernest Spaeth, and Nancy Lares for their assistance in conducting the 1974 seminar. The cooperation of the state directors planning committee, officers of the National Association of State Directors of Vocational Education, the Vocational Education Personnel Development Division, BOAE/USOE, Region V, USOE, and the Division of Vocational Education of the state of Ohio, is gratefully acknowledged.

Robert E. Taylor
Director
The Center for Vocational Education

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Section One:

Vocational Education Programs for Persons with Special Needs

Adapting Vocational Education Curricula to Meet the Needs of a Changing Society

by Lane Murray*

Most of the people gathered in this room with me today appear to be battered veterans of the academic/vocational wars. You've been around long enough to translate quickly the language of public speakers into the words of the people. When someone politely tells you "Don't call us; we'll call you," you immediately translate the remark into its true meaning. Well, my address today bears the title, "Adapting Vocational Education Curricula to Meet the Needs of a Changing Society." Translated, the title reads, "How to Swim Safely Through Shark Infested Waters."

I do not have the magic formula that will dissipate all of the problems (or sharks) that infest your territorial waters in whichever of the fifty states you represent. I can, however, give you a good picture—even moving pictures a little bit later—of a successful partnership between a state vocational office and a local agency. No one swims safely through shark infested waters on impulse or alone. Any successful swim requires a team of experts who study the event from initial plunge to eventual emergence. So too does any successful problem-solving by a local agency require teamwork between it and the state agency.

In Texas we have been blessed with a partnership between the Windham School District and the Texas Education Agency. If I were to give advice (and I'm about to) to state vocational directors, I could do no better than to recommend that they emulate the leadership of John Guemple and his staff. What do they do so well? They listen. They listen attentively, and with open minds. They listen and they hear the long, involved and time consuming explanations, poured out as catharsis by the local agency representatives. They figure quite rightly that the local agency people probably know more about their problems than anyone else in the world. What they want from the state level is help with the answers. I am going to present to you today some of the answers jointly worked out by the vocational-technical staff of the Texas Education Agency and the administrative personnel of the Windham School District.

The Windham School District was created as a non-geographical district within the Texas Department of Corrections (TDC) in 1969 to meet the educational needs of the adult felons.

Over 85 percent of Texas' 17,000 adult felons are school dropouts. Immediately it is obvious that for whatever reasons, these people didn't make it in the public schools. Seventy percent have less than a 7.0 educational achievement score. Practically all are without job skills and sustained

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[*] Lane Murray is superintendent of the Windham School District, Texas Department of Corrections, Huntsville, Texas.

work records, yet the average I.Q. is 100, and 40 percent of the total population is under twenty-five years of age. The ethnic breakdown is 39 percent Anglo, 44 percent black, 16 percent Mexican-American, and 1 percent other.

Knowing that this group had rejected (or had been rejected by) a curriculum system that is still college-prep oriented, lock-step-by-semester organized, with the learner having for the most part only a vague notion or hope of scoring 70 percent on an examination "to pass," Windham School District staff and faculty have faced the task of devising a comprehensive program for under-educated adults to furnish them the academic and vocational skills necessary to cope in today's ever-changing and highly technical society.

With input from the inmate-student and the classroom teacher, curriculum specialists have been developing performance-based teaching modules for a non-graded, career oriented curriculum in the areas of communications, science, mathematics, and social studies leading to the General Education Development certificate. In addition, Windham offers a regular high school diploma program on an individualized basis whereby the student can meet course objectives at his own rate, and upon completion, receive his diploma either from his home high school or from Windham High School. Because Windham's program is fully accredited with the Texas Education Agency, credits may be transferred. Health and physical education, music, art, modern dance, speech and drama are other courses which furnish acceptable means for self-expression, creativity, and the building of self-esteem. Such a program, starting from scratch five years ago on October 1, has a total of 4,779 graduates. From two graduation exercises per year, we have progressed to nine. On November 2, with three graduation exercises scheduled in one day, we will graduate 615 candidates for the GED certificate and sixteen for the high school diploma. Within the 1974-75 year, the total figure will exceed 1,500 graduates.

When I began describing this program, I called it "comprehensive," and surely, among such an elite group of specialists, you must have the uneasy feeling that something is missing. Right! Vocational education!

Windham has, since its inception, placed heavy emphasis on vocational education, and my belief is that the public schools must do the same if they are to meet student needs. Currently, approximately 600 inmates are in full-time vocational training programs in over fifty shops. As space and money are available this number will increase.

In order to understand Windham's approach to vocational training, it would help to understand the "community" work environment within the Texas Department of Corrections.

Texas Department of Corrections operates fourteen units within its system including a diagnostic unit and a pre-release unit. All are medium and maximum security units. The fourteen units are separated by some 200 miles from the most northern to the most southern unit in the state. Windham operates vocational programs on eleven of these fourteen units, excluding diagnostic, pre-release, and Coffield which is presently under construction.

For the most part the units are oriented toward agriculture, industry, and new construction operations, making the Texas Department of Corrections one of the most self-sufficient correctional systems in the United States. Of a total acreage of approximately 102,000, some 97,000 acres are used for agricultural programs producing 68 percent of the total food service costs for its approximately 17,000 inmates. The industrial division produces various materials for use within Texas Department of Corrections and offers products and/or services to qualified state agencies. For example, we operate a complete box factory; a mop and broom and brush production; a school bus repair facility; a tire retreading facility; furniture refinishing; a dental lab which manufactures dental prosthesis for all inmates; garment factories which produce not only the TDC uniforms, but also discharge clothing for the inmates, and uniforms for other state agencies; a mattress plant; a complete print shop; a textile mill which converts TDC cotton into all types of textile products; a soap and detergent factory; a braille textbook project; and an automatic data processing facility which serves not only for training, but also offers services to other state agencies.

Obviously this varied program of agriculture, industry, and new construction offers many areas for qualified inmates to further a vocational trade training while incarcerated. The Texas Department of Corrections concept of work and education provide for the inmate a dual base on which to build for a productive future when he is released.

I have here a twenty-eight minute sound/color film entitled, Everybody Wins, which illustrates this philosophy.*

Windham offers vocational courses in appliance repair, auto body repair, auto mechanics, auto transmission repair, barbering, cabinetmaking, commercial cooking, cosmetology, drafting, electric trades, farm equipment repair, floriculture, home and community services, horticulture, machine shop, masonry, meat cutting, plumbing, radiator repair, radio and TV repair, refrigeration and air conditioning repair, sheet metal, small engine repair, vocational electronics, vocational office education, and welding.

After viewing the film it is obvious that all these courses can be meshed with Texas Department of Corrections operations to ultimately give "hands on," real work experience, thereby enhancing or at least maintaining skills, whether immediate employment is inside or outside the prison. Vocational teachers are currently, through workshops at our curriculum development center, rewriting their curriculum guides utilizing behavioral objectives.

Naturally, our overall goal is to provide an opportunity for the inmate to prepare himself to meet the needs of the technical society which will face him upon his release. To help meet this goal Windham has implemented an adjunct to its vocational curriculum. Named the Reality Adjustment Program and called RAP for short, our occupational orientation instructors conduct sessions in areas essential to adjustment to the world of work. The objective of the RAP program is to stimulate the student's motivation for socially acceptable and adaptive means of "free-world" adjustment in all phases of his life style. The entire program is aimed at attitude change. Using a small group setting, the instructor attempts to facilitate discussion about adjustment problems both in the institution and those which will probably be met on the outside.

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*The film, Everybody Wins, may be borrowed by writing to: Mr. Ron Taylor, Public Affairs Officer, Texas Department of Corrections, Huntsville, Texas.

RAP is approximately eighteen weeks in length and each vocational class during its course will meet weekly with the RAP instructors and through role-playing and general discussion attempt to face the problems which the student feels are real to him. Videotape sessions allow the student to see himself in various roles. Considerable interest has been expressed by public school personnel in this program and our teachers have been invited to present its purposes at workshops. Perhaps the program can be successfully adapted to help solve adjustment problems for public school students.

An Educational Advisory Council made up of specialists from industry, labor, utilities, public services, and educators from all over the state provide to the decision-makers in the Windham School District information relative to the implementation of new programs, the elimination of obsolete programs, or the redirection of existing programs. In addition, the Advisory Council has established an ad hoc committee composed of vocational instruction experts to examine program curricula. An example of a redirected program is the vocational electronics course. Originally set up as an audiovisual aids repair course it has been redirected to enlarge its scope and bring it more in line with current industrial trends. Through a working relationship with such industrial leaders as Akia, Limited, and others who provide materials, test equipment, and practice modules, our students use up-to-date equipment with an opportunity provided by the industries for future employment. This relationship, which can serve as a model for future similar arrangements between industry and education, melds their appropriate functions by providing the ongoing requirements for technical change, and the mode for translating these changes into the learning experience.

Let us identify some positive steps that might succeed in the public schools, and put schools like Windham out of business.

1. Why not offer a non-graded curriculum in basic academic concepts and skills similar to the GED for students before they drop out of school?

2. Why not set observable, measurable objectives which both the student and teacher understand for relevant learning modules within both the academic and the vocational curricula?

3. Why not wipe out failure by allowing students to progress at their own rate?

4. Why don't we, through an enlightened, dedicated, and active citizens' advisory council achieve a communication link between the school and business community to update training and furnish training stations for "hands on" work experience?

5. Why don't we superintendents and other administrators convince parents and patrons that too much emphasis in both time and money is placed on a college prep program, and instead should prepare our youngsters for the world of work?

6. Why don't we talk less about career education and include much more of it in the academic curriculum?

Vocational education is on the threshold of its greatest hour. The schools of the nation are dedicated to the responsibility of providing the best possible education for youth. The influence that social and economic forces exert on the school must finally be resolved in the courses, experiences, and programs. A technological-minded society is forcing vocational education into a clear perspective, and the implications are explicit for both creative and functional planning. Vocational education planners are faced with the pleasing prospect of permeating the school curriculum with their kind of education from the early school years to the final stages of adult life. It is a worthy challenge; it can and it must become a reality.

The student of today, not the student of tomorrow or the student of the next century—but the student of today requires a genuine work oriented curriculum that enables him to be a productive citizen in the free world.

Vocational Education Programs to Meet the Special Needs of Persons in Michigan

by Addison Hobbs*

The Vocational-Technical Education Service of the State Department of Education is defining a preparational and developmental role in career education. That means education about careers . . . the opportunities and options for rewarding work . . . as well as education for careers . . . which includes training and development in one's leisure role, family role, citizen role, as well as the occupational role.

Career education in the state of Michigan is viewed as a continuing process, one that starts in kindergarten and never really stops. Vocational-technical education as a career preparation component in secondary schools is a very important part of the process. So is retraining the adult worker in new skills.

The preparation phase of career education also seeks to adapt to the changing needs of business and industry . . . to prepare for the demands of tomorrow's job market, to recognize the special needs of local regions, as well as changing conditions in the economy as a whole.

The idea is to help young people and adults find answers about their contributions to society . . . to learn how their interests and aptitudes mesh with the demands of the job market.

Michigan's career education emphasizes that the student should not wait for graduation to begin thinking about that choice. The State Board of Education had advocated that exploratory experience be made available through career development to every student, to provide for knowledge and choice of career options. This becomes the task of vocational-technical education. Equally important, the State Board of Education has said that every high school student should have the chance to acquire an employable skill before graduation. For some, this will mean the ability to hold a part-time job to finance more education. For others, it will be preparation for entry into the job market on a full-time basis.

The Career Development component of our Career Education model is complementary to the Career Preparation component. Career Development helps students on all levels, from kindergarten to adult, learn about themselves as physical, intellectual and emotional beings. It helps them discover who they are Career Development lets students explore new and emerging occupations. They can find information about job descriptions, educational requirements, pay range, future outlook, and working conditions. Career development also helps individuals to realize how occupational choice affects one's role in life. With this knowledge of self and career options, decisions can be made about one's future plans. These include academic and vocational goals, citizen, leisure and family goals.

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*Addison Hobbs is the Director of Vocational Education and Career Development Services for Michigan.

Toward this end, seven elements have been identified which impinge upon positive delivery of the predetermined objectives. Career Development has already been identified—others include guidance and counseling up to and including career placement which plays a vital role in our plans for a comprehensive placement service. This service will be provided to all students who attend educational agencies in the state. So far, such placement services have been offered on a pilot basis in comprehensive high schools, area vocational centers, community colleges, and regions serving one or more counties. But planning efforts for statewide placement programs are underway.

The Career Preparation component of our Career Education model provides opportunities to gain skills needed to continue one's education or to obtain employment. These skills are acquired through both academic and vocational-technical programs. Academic career preparation provides children, youth, and adults with basic skills needed to function effectively in today's complex society. Vocational-technical career preparation provides training for skills of direct use in gainful employment . . as semiskilled or skilled workers and technicians in new, emerging or recognized occupations. It can also prepare individuals for enrollment in advanced technical education programs.

Our Career Education model restructures the state's educational system to assure that all individuals receive adequate information and preparation for life and work. But the model remains an ideal to work toward.

One major goal is to provide high quality vocational education for at least 66 percent of the eleventh and twelfth grade youth in the state. This will be performance-based education, which means minimum expectations of the student will be agreed upon before instruction begins. Programs and courses must be defined by what the student should be able to know and do, not by credit, seat time, courses taken, or textbooks used. This means that the minimum expectations of an auto mechanics program in one part of the state should be no different than the minimum expectations of an auto mechanics program in another part of the state. To move a student's family from one area of the state to another should not disrupt his or her career goals.

One means of meeting this goal is the establishment of area vocational-technical programs. This system pools students and existing resources to accomplish joint program delivery to meet area-wide needs. This delivery system requires flexibility in the steps leading toward full implementation. Shared-time, which is usually an interim step toward the establishment of area vocational-technical centers and area programs, represents one option in the continuum. However, the options are limited by existing facilities.

An area center is a secondary and/or post-secondary facility which serves a designated region of the state. These centers pool students and financial resources, enabling two or more school districts to offer more and better vocational and technical programs than they could separately. Such area center programs make it possible for secondary and adult students to have access to twenty-five to thirty-five occupational program offerings, a range most individual districts could never provide.

Students enrolled in these centers usually spend half of their time there and half in their home schools. Their identity remains with their home school. A total of thirty-two area vocational centers have been established at the secondary level. Another forty-five centers are needed.

The logistics of such a comprehensive Career Education program are necessarily complex. Planning, financing, and evaluation efforts have been a massive undertaking. The concept of Career Education Planning Districts was developed after surveys showed little or no coordination between local career agencies providing career education. So forty-nine Career Education Planning Districts were formed grouping the state's 531 kindergarten through twelfth grade school districts, its twenty-nine community colleges and the thirty-two area vocational centers. These forty-nine planning districts promote horizontal coordination of career education—that is, within occupational fields or grade levels. They also assist in vertical coordination between junior high and secondary schools, between secondary schools and community colleges and, in some instances, baccalaureate granting institutions.

Horizontal coordination has been widespread since the planning districts were formed. And our demonstration project involving Kellogg Community College and Calhoun Area Vocational Center is in its second year of development, showing some of the potential for vertical integration of career training.

Such cooperative planning also has led to the development of new programs in those occupations where the greatest number of jobs exist. Another result has been substantial growth in occupational programming for students with special needs, including the mentally and physically handicapped.

The financial base for many achievements of the Career Education program was laid by legislation enacted in 1970. The bill recognized that vocational education is more expensive than non-vocational programming. It established the "Added Cost Basis" of reimbursement. At the time these funds were first appropriated, there were gaps across the state where no opportunities existed for vocational training. In the fiscal year 1970-71, 106 school districts offered no vocational programs at all for their 46,000 students. Of the remaining 421 districts, 148 offered only one program, usually in office education, agriculture, or homemaking. The number of kindergarten through twelfth grade districts which have no vocational programs has been reduced to seventy-seven, as the result of the added cost reimbursements by the state, coupled with federal funds for construction and equipment.

The concept of evaluation is built into the Career Education program at several levels. It is, for example, an integral part of the program standards of quality to develop performance objectives for vocational training programs. Although the primary reason for the development of these objectives is to provide common achievement goals for students preparing for a specific field, the objectives also will form the basis of evaluating instructional delivery systems. More than 1,200 vocational educators have been involved in writing such performance objectives for 162 vocational programs. Evaluation also is a goal of the statewide placement program. In fact, a student follow-up program using thirty-two student response items has been instituted on a statewide basis. Follow-up data will provide information to local educational agencies, telling them about what happens to their students and the effectiveness of vocational education programs as seen by their graduates.

An ambitious program? Yes, Michigan's vocational-technical education program certainly is ambitious. Our aim is to make occupation skill programs available to every high school student in the state and to guarantee that no student entering high school in Michigan leaves without the chance to gain employable skill in one of these seven occupational fields, regardless of his or her ultimate career goal. But it is our hope that the aims of the Career Education program will help foster the ambitions of the children, youth, and adults of the state. We hope the youngster who wants to be a fireman, or a doctor, or an x-ray technician will know why he or she wants to play that role in life. We hope that vocational-technical education's contribution to career education will help provide incentives for young people to stay in school, because their learning experience is related to their future goals. That they will enter adult life with a greater appreciation of their potential and the possibilities for meaningful careers. And we hope that vocational education will help adults adapt to the ever-changing conditions of the job market.

Vocational-technical education in Michigan is an integral part of the career educational experience and, because a productive, creative work force is a real economic asset, we think it an important key to the prosperity of our state and the nation.

Vocational Education Programs to Meet the Special Needs of Persons in Florida

by Joe D. Mills*

The topic which I will speak to you about today is "Vocational Education Programs to Meet the Special Needs of Persons in Florida." This is interpreted to mean those persons with special vocational needs who have been identified as disadvantaged or handicapped. Because of time limitations, I will speak briefly of our effort to serve this group—an effort which has been substantially increased by the set aside provisions of the Vocational Education Amendments of 1968, as they apply to the disadvantaged and handicapped.

The state of Florida has sixty-seven school districts, twenty-five area vocational-technical centers, twenty-eight community colleges, the university system, and a school for the deaf and blind. In addition, there are special state institutions under such state agencies as: the Division of Mental Health, the Division of Mental Retardation, the Division of Corrections, and the Division of Youth Services. I would like to point out that these many and varied state institutions having a responsibility for the disadvantaged and handicapped are being provided consultative services and financial assistance from set aside funds by the Division of Vocational, Technical and Adult Education.

The Florida State Plan for the administration of vocational education provides that programs, services, and activities be made available to students with special needs—through a delivery system to local school districts, community colleges, and special state schools and support to universities for preservice and in-service education through the community colleges, or school districts.

Agreements and arrangements between the Division of Vocational, Technical and Adult Education and other agencies and disciplines having responsibility for the disadvantaged and handicapped have been established at state and local levels as a means of combining resources to meet the education and rehabilitative needs of the disadvantaged and handicapped.

For example, in 1968, the Florida Legislature in a thrust for rapid program growth for programs for exceptional students, provided $16,646,641 over a five year period for facility construction which has now been completed with the construction of 131 facilities.

Since some of these facilities include pre-vocational and vocational skills training for the handicapped, mentally retarded, and physically handicapped, the Division of Vocational Education agreed with the Bureau of Education for Exceptional Students to equip the facilities for vocational purposes

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[*] Joe D. Mills is the State Director of Vocational Education for Florida.

on a project basis. Ultimately, $371,916 in vocational education funds for the handicapped were allocated to this statewide project.

Over the past five years, Florida has considerably increased its commitment to the disadvantaged and handicapped. This is evident in that as categorized federal funds have become available, state funds have likewise been provided in increasing amounts for support of programs to the disadvantaged and handicapped. This increased state support through legislation is attributed to some extent to the impact of categorized federal funding as provided in the Amendments of 1968. It might also be added that as federal and state funds have become increasingly available, local financial effort has also increased.

During FY 1973-1974, a new state education funding program was implemented—the Florida Education Finance Program (FEFP), in which provisions are made for the higher costs of instruction for disadvantaged and handicapped persons. It is provided in FEFP that vocational instructional programs for the disadvantaged and/or handicapped persons earn more state monies than regular instructional programs. I cite this example to illustrate the legislative commitment to the education of the disadvantaged and handicapped. Some of you will perhaps be interested in additional information regarding the new Florida Education Finance Program which will be provided if time permits.

I have been asked also to discuss placement and follow-up activities. As you are well aware, vocational education has for a long period of time been concerned with placement and follow-up. Four years ago, our division, in an effort to improve the system for placement and follow-up selected a school district (Sarasota) to develop a model program for statewide application. The model was field tested in twenty-two area vocational-technical centers and three school districts before it became operational statewide in FY 1972-1973 for vocational education.

Now it has been inacted into law and in state board regulations that each school district shall have a district-wide plan to insure that organized placement and follow-up services are established and maintained to assist all students graduating from or leaving each secondary school and each vocational-technical center in the district.

A state priority for the fiscal years 1974-1975 and 1975-1976 is that the efforts and energies of the Department of Education are directed toward improving the delivery of services to the students by focusing on priorities which include improved placement services for students as they leave school and conduct follow-up studies to determine program effectiveness. The implications of this effort are especially significant when considering the disadvantaged and handicapped.

The procedure for grant requests and funding programs for the disadvantaged and handicapped is the vocational funding guide. Each year, the Division of Vocational, Technical and Adult Education distributes a funding guide to school districts, community colleges, and to other state institutions. This guide provides forms to request funding support by category for services to the disadvantaged and/or handicapped. These requests are reviewed by regional and state vocational staff and when justification is established and funds are available, the requesting agency is notified of a grant award. You might be interested to know that Florida has thus far utilized all federal funds for the disadvantaged and handicapped, where, at this time, a point has been reached that statewide requests for categorized funds exceeds the supply.

There are many good programs going on in Florida for the disadvantaged and handicapped. In the remaining time, I will review some of them—selected at random by category. First, I will discuss programs for the disadvantaged and follow with a few examples of what is being done for the handicapped. Slides will be used to more clearly describe some of the vocational education training programs and supportive services being provided to persons with special needs.

Programs for the Disadvantaged

Vocational education of the disadvantaged is provided in regular vocational education programs, modified programs and special programs. It is believed that first consideration should be given to serving the disadvantaged in regular programs with provision for supportive services to help them succeed.

Some of the conditions which impair the progress of the disadvantaged in vocational training are: difficulties in communication and computation skills, motivational, attitudinal and socioeconomic problems. In Florida, success has been achieved in helping the disadvantaged by providing them with supportive services in classrooms, shops, or laboratories. When needs and goals of students are not met in regular programs, modifications are made whereby the student's needs would be better served. Such modification may include changing the number of instructional modules and expanding and intensifying supportive services. These are examples of things being done to modify regular programs in such a way that disadvantaged persons may succeed.

Special courses or programs are organized to meet the needs of the disadvantaged when their goals are not likely to be met in regular or modified programs. Many of these programs are provided in correctional institutions, youth service centers, adult education centers, and exemplary centers for disadvantaged youth.

The key to the success of the disadvantaged in vocational education is the delivery of appropriate supportive services to meet their needs. To deliver these services, several different kinds of programs have been implemented. Some of these are: mobile recruiting and counseling services and individualized prescription techniques of instruction conducted in learning resource centers.

The mobile recruiting and counseling units provide information and counseling services to in-school students, school leavers, returning veterans, and to unemployed and underemployed adults and is utilized to better inform community leaders of vocational educational opportunities available to the public. The unit operates at fairs, shopping malls, parades, community centers, education centers, churches, military bases, in an effort to reach all individuals.

Through the mobile units, information is presented in individual conferences, slide presentations, loop sound 8 mm movies, brochures, pictures, and question-answer sessions. Staffing consists of two counselors in each unit. The program is operated on a year-round basis.

In learning resource centers, individualized instruction is provided in remedial reading, remedial mathematics, language development, complimentary skills, employability behavior programs and occupational exploratory programs (including work sampling and pre-vocational activities).

In reading, arithmetic, and language programs, diagnosing and prescribing for individualized improvement of learning difficulties are achieved. The complimentary skills program provides for personal-social skill training including consumer education, health, education, and safety. The employability program provides development of independent control over certain behaviors for individualized improvement in employability status. The occupational exploratory programs provide opportunities to explore and to gain new occupational information for an assessment of: work abilities, work qualities, work behavior, work habits, interests, aptitudes, and training needs.

The pre-vocational program provides occupationally-oriented instruction in prerequisite skills and knowledge to enter vocational training.

Qualified staff to manage learning resource centers are trained at two state universities in programs supported by grants from the Division of Vocational, Technical and Adult Education.

Programs for the Handicapped

In 1969, statewide enrollment reports of handicapped persons in vocational education totaled 400 persons served in three school districts. In 1973, the reported enrollments had increased to 13,200 handicapped in school districts, community colleges, and special state schools. Instruction for the handicapped is being provided in regular classes with supportive services and in modified and special classes with supportive services. A majority of the vocational education service to the handicapped is to the mentally retarded which comprises 80 percent of Florida's handicapped population.

There are reasons to believe that what has been accomplished in providing service to an increasing number of handicapped persons in Florida can be attributed to the continuing working relationship of the Vocational Division with the Bureau of Exceptional Student Programs and the Division of Vocational Rehabilitation. This close working relationship is essential to the maintenance of interagency agreements which have been established.

At local levels, it is required in the state plan that a *Local Council for the Education and Rehabilitation of the Handicapped* be established in each school district or other state institutions utilizing the 10 percent set aside funds. These councils perform such functions as: identifying handicapped persons, assessing needs, and combining resources of agencies in support of programs to meet the needs of the handicapped.

There are a number of activities which are going on in Florida which have had significant contributory effects on programs for the handicapped. A few of these programs will be highlighted here to give you some idea of what we are doing for the handicapped.

In keeping with our concern for better instruction, the chairman of the vocational teacher education departments of the state universities were called to Tallahassee to advise them of a division priority to provide more training opportunities for teachers of handicapped in areas of career education, pre-vocational education, occupational orientation, and vocational education. This group of teacher educators were encouraged to submit proposals for workshops and/or seminars to assist teachers in doing a better job teaching the handicapped. Five of the nine universities responded with requests for funds for implementation of seminars and workshops.

As a result, workshops and seminars got underway immediately and are continuing. Each is structured to effect a mix of vocational teachers, special education teachers, and rehabilitation personnel as a means to exchange expertise.

Our close working relationship over the past five years with vocational rehabilitation staff has exposed vocational educators at state and local levels to work evaluation—interest developed and in 1971, the first vocational work evaluation program began in the public schools of Florida when the Pinellas School District agreed to operate a pilot model. It began in a temporary leased facility where a work evaluation program was established to evaluate handicapped students from exceptional student centers, the vocational-technical centers, and the adult clients referred by Vocational Rehabilitation. This program has been observed by many educators both in-state and out-of-state. During the third year of operation, a Certificate of Merit was awarded to the Pinellas School District by H.E.W. for outstanding service to programs for handicapped persons in work evaluation, job training, and placement.

Work evaluation has flourished in the Pinellas School District to the extent that the first public school facility to house work evaluation will soon be operational at Pinellas Vocational-Technical Institute as a comprehensive guidance and evaluation center occupying a floor space of 10,000 square feet. The influence of this project has been felt throughout the state in that eight additional centers will be operating this year in other school districts and community colleges.

Another project of interest which began this year is a vocational supportive program for the hearing impaired at Lively Area Vocational-Technical School, Tallahassee. We are excited about this program because of its setting in a vocational-technical center and because of the involvement of vocational rehabilitation and exceptional child education with vocational education. This program will be viewed with special attention as a possible model for use in the state, as the model work evaluation center in Pinellas District is being viewed.

Some objectives of the program at Lively Vocational-Technical School are:

- To identify hearing impaired persons in Leon and six surrounding counties
- To prepare, collect, and adapt vocational and academic materials for the hearing impaired
- To provide pre-testing and counseling prior to placement in vocational and academic curricula
- To place the deaf in vocational training providing interpretive services and translation to manual communication (signing and finger spelling) for deaf students.

The staff assigned to this project include: 2 teachers of the deaf (who serve as resource persons and interpreters) and a clerk typist.

By next year, this program will be evaluated as to its possible effectiveness to improve opportunities for the hearing impaired to gain access to and succeed in vocational training in other institutions.

Section Two:

State Level Programs to Facilitate the Dissemination and Implementation of New Curriculum Ideas

Programs of Personnel Development to Facilitate the Dissemination and Implementation of New Curriculum Ideas in the State of West Virginia

by Clarence E. Burdette*

We in West Virginia have been spending almost all of our efforts in the last several years on construction of additional facilities. We had to—we were so far behind in terms of adequate facilities. We are reaching the point now where we are at least approaching adequacy in terms of facilities in most areas of the state.

It had become increasingly apparent that we needed a major effort in the improvement of curriculum, improvement in the approach to teaching, and improvement in the matter of making programs more relevant to the existing employment opportunities

The story is told of the man who was walking through the forest in West Virginia who suddenly came upon an arrow sticking in a tree. The arrow was dead center in a very, very small bull's-eye. As he walked along a little farther, he came upon another arrow—again dead center in a very small bull's-eye. He thought to himself, "The person who is shooting these arrows must really be a great archer." And this occurrence was repeated again and again, each time the arrow inside a very small bull's-eye. Finally he came upon an archer and asked, "Are you the person who has been shooting the arrows into the trees in the very small bull's-eyes?" The archer admitted that he was. The man said, "My, what a great archer you are to be able to hit such a small bull's-eye." "Oh! It isn't too difficult," replied the archer, "actually, I shoot the arrows first and then draw the bull's-eye around the arrow."

We decided to draw our target first—and the target was that we were going to improve vocational education curriculum in the state. We spent considerable time researching and discussing what appeared to be the most effective approach to improvement of curriculum. We decided that the competency-based approach was the approach we had to take. We have decided to shoot all of our arrows at that target and hope to get as many as possible inside the bull's-eye.

One of our major approaches, or beliefs, was that if you are going to improve curriculum, you must improve teachers' capabilities to develop curriculum along the competency-based approach, and that they must understand competency-based instruction and be able to utilize materials that have been developed by others.

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So, the new idea as far as we are concerned—the new curriculum idea, is that of competency-based instruction. We are attempting to disseminate the idea and implement the idea through programs of personnel development, primarily in-service personnel development, funded in part by EPDA and in part from state sources.

One of our first moves was to create a position on our state staff for a coordinator of Curriculum Development and Dissemination, and we employed Dr. Fred Harrington, formerly of The Center for Vocational Education, in that position.

Our next move was to thoroughly in-service our instructional staff in the meaning of competency-based instruction. Then, we said, if we are really going to cause anything more than a ripple in the state, we have to have with us the local directors of vocational education. We devoted a series of four local directors' conferences, which were held at intervals during the year, to creating an understanding of competency-based instruction—selling them on the idea that it was the way to go for program improvement, and then teaching them the basics of developing competency-based instruction. We were convinced that the change agent in improving instruction would be the local director.

Now, in those four meetings, we involved our university which offers a graduate program in vocational education, and we utilized a number of consultants from around the country. Simultaneously, with this work with the directors, we were beginning to work with teachers in seminars to sell them on competency-based instruction as an approach, and to teach them how to develop competency-based curriculum and how to adapt and use that which had been developed by others.

We have tried to do this in all of the vocational education areas. Now, specifically, what have we done with the teachers? We have held summer seminars or workshops to train teachers to develop and use competency-based curriculum materials in the following areas:

Off-Farm Vocational Agriculture Occupations
Business and Office Education (including secretarial, clerical, and accounting occupations)
Auto Mechanics
Electronics
Building Maintenance
Environmental Control
Graphics and Printing
Warehousing
Industrial Maintenance Mechanics
Electronics
Distributive Education
Diversified Cooperative Education
Pre-Vocational Exploratory Program
Child Care
Clothing and Fabric Services
Elementary Career Education (Orientation)
Food Preparation and Service
Health Occupations

Another major effort in implementation of this new curriculum idea has evolved around the planning and construction of a new vocational education center in Boone County, West Virginia. When funds were made available for the construction of this center, the superintendent and the director of vocational education in that county agreed to embark on a partnership with us to develop an innovative "lighthouse" approach to vocational education.

The approach involved a complete labor market analysis of the county and the surrounding area. It involved the utilization and involvement of advisory committees and community input on a scale never before accomplished in West Virginia. Businesses, industries, and individuals in the county contributed $75,000 for equipment purchase to assure that the equipment in the new center would be the latest and best available.

The decision was made to develop the entire program of the center on a cluster basis. In planning the building it became apparent that when the cluster approach is used, a considerable amount of open space is called for.

It was agreed in advance that the entire curriculum for this center would take the competency-based, individualized approach. We agreed to help the school board with the employment of teachers. About six months in advance of the opening date for the center, the teachers were employed and immediately entered into a program to learn about competency-based instruction and how to develop competency-based curriculum.

We contracted with the RCA Educational Corporation to manage this project. By the time this school opens, the entire curriculum will be developed on the competency-based approach.

In addition to the teachers who were employed to work in the Boone County Center, we have involved about thirty-five other teachers from around the state who have a vital interest in competency-based curriculum and who desire to become involved in it. Our plan is to print the materials that are developed for this center and to disseminate them throughout the state.

Another approach we have taken in the development of competency-based instruction is to make available "mini-grants" in a maximum amount of $3,000 each to teachers throughout the state who have demonstrated the ability to develop competency-based curriculum, and who have the desire to produce. These grants were made on the basis of an application from the teacher and the local school system.

One of our major goals, which has not yet been accomplished but which we are moving toward, is the development of a curriculum laboratory for the state. This laboratory will probably be more of a library for the cataloging, storage, and dissemination of materials rather than for the development of materials.

We anticipate that we will continue to develop curriculum materials through teacher workshops, mini-grants, and contracts with universities and others. We have already initiated a project to scour the country, particularly through the ERIC System, for competency-based materials which are applicable to our vocational education service areas.

We recognize that it will not be possible for us to develop all of the materials that we need to develop. I believe that the regional curriculum laboratory approach, along with its national consortium, can be an important and viable approach to making competency-based curriculum materials available to all of us.

I want to hasten to say that, while we have worked in all of the areas that I have mentioned, we do not have yet available complete materials in any of those areas. We would, however, be happy to share with you any of the things we have developed which we feel are of sufficient quality for sharing.

One of the basic principles of vocational education is that instruction should be based upon an analysis of the occupation, and that the content of the curriculum must be based upon the skills and related technical knowledges which are necessary for entering and progressing in that occupation.

We have talked this as long as I can remember, and we have taught our teachers the techniques of occupational analysis, but we have never reached the point of actually developing lists of competencies on any organized basis.

I am thoroughly convinced that if we are going to improve vocational education programs that we cannot merely tell our teachers that they must take this approach. We must take an active role in doing this on an organized basis at the state level. The teacher does not have the time, and in many cases the skill, to accomplish this in working alone. If you want good clean high quality oats you must be willing to pay the price. If you are willing to settle for the oats after they have been through the horse, you can get them pretty cheap. If you want good high quality curriculum development to take place, we are going to have to pay the price in terms of effort at the state level.

And so it came to pass, in 1963, a decree went out from the lords of the Legislature that all the states should receive taxes, in that all Vocational Education should prosper. And all the statesmen came forth with palms extended and received the moneys.

And the lord of the Legislature said, "Take this and do great works, and in a quarter-score years we shall come again and see what ye have done. Now, go forth and multiply."

And so they went forth to do what was mandated, but when the coin was divided according to need, there was none left.

And when the lord of the Legislature came again for the accounting, the statesmen beat upon their breasts and wailed, "Lord, we were overextended and all that was received was used to maintain. We could not multiply."

Then the lord of the Legislature said, "Your cries of distress have been heard, and in some measure, have been understood. Now, in the next half-decade, ye shall receive all that ye had before . . . and more."

And the statesmen replied, "It is good, lord."

Then the lord of the Legislature said, "And ye will serve the poor and needy, and the disadvantaged and handicapped."

And the statesmen said, "Good, lord."

"And ye shall serve the consumer and homemaker . . . the postsecondary and the adult."

And the statesmen chorused, "Good, . . . lord."

"And ye shall submit annual and semi-annual reports of your plans . . . your process . . . and your accomplishments."

And the statesmen cried, "Good lord!"

"And ye shall be evaluated . . . and ye shall be assessed. . . ."

And the statesmen gnashed their teeth and beat upon their breasts and cried, . . .

"Good Lord!"

"THE WEST VIRGINIA VOCATIONAL EDUCATION SCROLL" as delivered by Clarence E. Burdette, Assistant State Superintendent, Bureau of Vocational, Technical, and Adult Education, West Virginia Department of Education, at the National Seminar for State Directors of Vocational Education, September 26, 1974.

Indiana Personnel Development for the Implementation of New Curriculum Ideas

by Don K. Gentry*

I am pleased to have the opportunity to make this presentation relative to our personnel development activities for the dissemination and implementation of new curriculum ideas. An attempt will be made to outline a few of the programs we have operated or have under way and let you determine if it is new or innovative. I personally believe that most or all of our techniques used for the dissemination and implementation of new curriculum ideas are not new, but are only a combination of proven practices that have been developed over the years. For all of these we thank you, because we are not too proud in Indiana to borrow ideas.

A list of the new curriculum ideas or curriculum development activities and the techniques used to disseminate or implement them are as follows:

1. "Critique," a quarterly publication of new research and curriculum ideas is published and disseminated to administrators, teachers, researchers, teacher trainers, and others. This technique has been well received and has received very high evaluations on effectiveness. Copies are available through our Research Coordinating Unit by request.

2. Region V: Teacher Training Workshop - Indiana was pleased to host a conference on teacher training for the six states in Region V. This conference technique was used to disseminate and exchange many new curriculum ideas being incorporated into professional development programs in the Midwest. Follow-up conferences were recommended by the participants.

3. State Teacher Training and State Staff Conference - Our fourth annual conference was just completed, bringing together all of the teacher trainers and state staff to discuss current challenges relevant to professional development. Much time is spent each conference on a relevant curriculum area. This year our theme centered around competency-based teacher training curriculums.

4. Statewide Consumer Oriented Consumer and Homemaking Education Curriculum Implemented - A consumer oriented consumer and homemaking curriculum was developed over a three year period by two of

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*Don K. Gentry is the State Director of Vocational Education for Indiana.

our state universities working under the direction of our home economics staff. The resultant curriculum was adopted by our State Board of Education as state policy for all public schools in 1972 to be implemented by the fall of 1974. Over 600 teachers have received extensive in-service education on the usage of the new curriculum and how to implement it into their programs. Copies of the curriculum materials are available at cost from our Indiana Vocational Materials Laboratory, Indiana State University, Terre Haute, Indiana.

Additional work is presently under way to pilot occupational home economics curriculum materials in pre-ninth grade Child Care and Hospitality Service Occupations in conjunction with McKnight and McKnight Publishing Company.

5. Career Education Curriculum Guide K-12 - More interest has been shown in our published guide of career education activities than any other curriculum venture ever undertaken in our state. All of you were mailed copies and many of you have requested additional copies. We will continue to share them with you at a cost recovery basis from our Indiana Vocational Materials Laboratory. Over 5,000 have been disseminated at this point. Hundreds of teachers and administrators have received in-service training on the usage of the materials and more importantly how to develop materials of their own. All activities in the guide were tested and validated before the final printing was made.

6. Distributive Education: LAP's (Learning Activity Packets) - Indiana has participated with nine other states in the development of the packets. Due to the fact that so many of you have been involved, I will not go into detail on the materials. We have conducted extensive workshops on the implementation of these materials in our distributive education program. At this point approximately 60 percent of our coordinators have been involved in the workshops. An in-service contract with Indiana University will continue through this year to fully implement the activities in all of our programs. This contract also calls for individual follow-up of the persons who have already had the training. These materials are available through the Wisconsin State Department of Public Instruction.

7. Business and Office Education: Intensive Office Laboratory Curriculum Development - Over the past six years in our state over 150 secondary level laboratory programs have been developed with the curriculum materials being developed from actual situations and materials being collected by the instructors from various businesses in their community. All instructors have received training in preparing a training package from the materials received from the business world. An approved program must start with at least six packages, with many of the programs now having over thirty, up-to-date packages in operation. Instructors are encouraged to develop at least one new station each year. Many of you have utilized our staff or materials in your state. Additional information is available from our business and office education staff.

8. Health Occupations: Competency-Based Curriculum Developmental Project - Our State Board has a project under way to delineate the competencies necessary to teach the various programs at the secondary level and a further delineation of the competencies needed by students to perform at various skill levels. The completion of this project will give us a basis for curriculum development we have not had before in health occupations. This program is being carried out by a consortium of teachers in the health occupations area and was a result of a needs study done by the health occupations organization. More information can be obtained by writing HOPE, Inc. in care of our health occupations consultant. Requests will be forwarded to the proper subgroup relevant to your concern.

In closing, it is my strong belief that much duplication of effort is happening across this nation. We must do more sharing of ideas, cooperating between states and have a faster development of the much needed coordination through the curriculum centers. As one state we do not have the answer to this very complicated, unending task of the dissemination and implementation of new curriculum ideas through personnel development activities. I hope through our sharing of ideas and working together we will be able to conquer this task.

Oregon's Personnel Development Approach

by Monty E. Multanen*

The Oregon Board of Education has committed itself to assuring that teachers are qualified through training, experience, and competence for the responsibilities they hold. With career education placed as a top educational priority within the state, the Career and Vocational Education Section of the State Department of Education has a major role in seeing that in-service and preservice programs strengthen and increase the effectiveness of vocational education personnel as well as other personnel involved in career education activities.

There have been a variety of in-service and preservice programs conducted over the past several years which have contributed to the development and maintenance of a total system for personnel development. Of particular significance, has been the development of innovative approaches to facilitate the dissemination and implementation of new curriculum ideas. Described below are just a few of the major personnel development approaches functioning in Oregon.

Cadre Training

The concept of cadre training, although not new, has been a very useful and exciting approach to in-service education in Oregon and has become an integral part of the state's total delivery system for staff development. It also has been a key factor in implementing curriculum change. Oregon's approach to cadre training is one of preparing a group of practitioners capable of training others based upon needs that have been identified and prioritized. Experience, ability, and recommendation are the basis for a cadre member's selection. Every effort is made to adequately cover the state according to population density and number of personnel to be trained.

To date there have been eleven separate cadre training workshops covering seven areas: career awareness, career exploration, career decision-making, overall career education, cluster implementation, individualized instruction, and cooperative work experience. The following is an overview of a few of them.

Career Awareness - In July and August of 1973, twenty-six elementary personnel were trained to provide consultative services and/or conduct in-service workshops for local school districts in career awareness activities (grades 7-10). According to the cadres written reports for the entire year, there were approximately 800 hours of in-service instruction offered by the cadre enrolling over 3,200 teachers. This represents a little over one-fourth of the total elementary teaching force. Many new and innovative curriculum ideas have been developed, disseminated, and implemented as a result of the cadres effort.

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*Monty E. Multanen is the Director of Career and Vocational Education for Oregon.

Career Exploration - Also in July and August of 1973, forty-six people were trained to provide consultative services and/or conduct in-service workshops for local school districts in career exploratory activities (grades 7-10). During the year, there were approximately 2,500 hours of in-service instruction offered by the cadre enrolling 930 teachers, administrators, and counselors. Many new curriculum ideas have likewise been implemented.

Individualized Instruction - A total of twenty-three persons from all across the state were trained in August 1973 to conduct in-service workshops in individualized instruction. Of the twenty-three, fifteen have conducted workshops and as of June 1974 a total of 213 teachers have been involved in around 450 hours of in-service instruction. A complete set of training modules were developed for use by the cadre in working with teachers.

Cluster Implementation - The cadre training for this area was conducted in August 1974 and as such there are no reports of the extent of in-service activity. The major objective was to train a cadre to assist other cluster teachers in starting new clusters and upgrading existing programs at the high school vocational preparatory level. A set of learning modules was developed and will be used by the cadre in providing in-service to teachers.

Career Decision-Making - The cadre training workshop in this area also was held in August 1974. The intent was to provide advanced training for the previously trained awareness and exploration cadres and give them some additional skills in working with teachers at both the elementary and secondary levels in the area of career decision-making. The workshop was very successful from the standpoint of broadening the knowledge and skills of the participants and has provided a vehicle to disseminate and implement some very unique and innovative activities and strategies into the classroom.

Counselor Training

Over the past three years Oregon has conducted a special project designed to implement and improve career guidance programs. In 1971-72 a total of seventy-five counselors from thirteen Portland high school counseling departments and some selected teachers and administrators were involved in over ninety hours of instruction. In 1972-73, a similar project was funded in the Beaverton and Portland Metropolitan areas involving approximately eighty-five educational personnel in ninety hours of instruction aimed at identifying new roles and relationships for counselors and others in career guidance and counseling. For 1973-74, a similar project involved sixty people in a fall-winter sequence. From these three projects have come some very good career guidance models as well as some good syllabi.

Preservice/Career Education

The Oregon State Department of Education funded a special project starting in 1971 titled, "Career Education - An Integral Part of Teacher Education." The purpose of the project is to outline a developmental strategy which would result in all prospective elementary and secondary teachers having opportunities to become acquainted with career education and see how these concepts can be incorporated into their classroom teaching.

With the formation of an interinstitutional committee assigned to the task, and a full-time director, there have been a number of accomplishments. The following are just a few:

1. Career education has been introduced into all preservice programs of all institutions in the Oregon State System of Higher Education, with over 1,100 prospective teachers having had at least basic exposure to career education.

2. A preservice program model is under development at Oregon State University.

3. A preliminary set of fifty career education competencies have been identified for elementary and junior high school teachers.

4. The development of modules for implementing career education into preservice programs is under way.

Personnel Development Centers

A new and challenging approach to career-vocational education personnel development in Oregon has been the initiation of a statewide system of career-vocational education personnel development centers that are field-based and locally focused. Two centers are currently in operation. The essence of the center concept is to decentralize teacher in-service training and muster the resources of a multiple of agencies toward a common goal of improving instruction and disseminating and implementing new curriculum ideas in career and vocational education. The developmental project was initiated in 1972 through a cooperative arrangement between the Oregon State Department of Education and Oregon State University. The initial project was partially funded with a special grant under the Educations Profession Development Act, Part F.

There are three unique characteristics of the center concept:

1. The operation of the program is field-based/locally focused; i.e., it is directed to individual needs at the local level, it is decentralized from the university campus, and it makes use of local facilities and resources by providing live teaching/learning situations.

2. The instructional offerings are competency-based in that they focus on developing or improving the individual's ability to perform identified tasks.

Major functions and activities of the centers are: identifying personnel development needs; providing individual professional development guidance and counseling; serving as an expediter of field-based instructional programs, scheduling workshops, seminars, and courses; providing coordination, communications link, and consultant services to consortium agencies; and serving as a field-testing station for innovative teacher education practices and materials.

Section Three:

State Level Management Information Systems for Curriculum Development

Colorado's Management Information System Impacts upon Curriculum Decisions

by William D. Woolf*

I would like to make three background statements that might help align my remarks and your thinking for the short period we are together in this session.

1. The Colorado State Board for Community Colleges and Occupational Education is organized into three branches.

   a. Program Planning and Development Branch: The planners are responsible for initiating programs. The original contact for a vocational program might come from a local person to the planner or it might come from a planner to the local area. Once the approach has been made, the program planned and approved, it is then turned over by the planner to the supervisor.

   b. Programs Operation Branch: The supervisor's main responsibility is to monitor program quality and teacher credentialing.

   c. Professional Development Branch: The Professional Development Branch is in charge of the Management Information System, supervising the Educational Professional Development Act grants, Teacher Education, Career Education, the Research Coordinating Unit, and the Management by Objectives System.

2. The second background statement I would like to make relates to our curriculum approach. We see curriculum efforts at two levels, i.e., macro level and micro level. The macro level is a total statewide approach and refers to establishing criteria for the development of content and materials. In this instance, Colorado's supervisors and planners are our curriculum experts in the state since they shape and control the curriculum at the macro level.

   The micro level refers to the efforts of local personnel, including the teacher, in shaping the curriculum.

3. In Colorado, the Management Information System (MIS) has a much larger impact upon the macro curriculum effort than it does upon the micro level. The application

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of MIS to curriculum problems thus far is limited almost entirely to the macro level. Hence another title for my remarks could be "How the Management Information System influences curriculum through the State Board planners and supervisors."

MIS across the nation is still in its infancy stage. Much of its operational potential is still not delivered. Necessarily much of what anyone has to say about MIS will to some degree, deal with what is on the threshold or about to happen.

Colorado is not any different for we do have our up and running components, we have our just-about-to-deliver components, and we have our futuristic components. Further even when the components are operational, there is much we can improve about how the information is used. The whole process is open-ended and spiral in nature. The work is never complete and is never of the quality we desire.

Further, I think that it is important to give credit to our sister states and agencies who have helped us develop as we have to date. Most of what we have has been adopted from the developmental work accomplished in other states. Certainly The Center for Vocational Education at Columbus and participant Harold Starr deserve credit for much of the material presented as well as the state of Oklahoma and others.

There are four main impacts that the Colorado Management Information System has had upon our curriculum:

1. MIS has developed a data base which produces useful indicators of vocational opportunities for students. Basic enrollment data supplies the supervisors and planners with information about how adequately selected target populations (disadvantaged or handicapped) are being served. Numbers and types of vocational programs data indicate the scope of vocational programs offered or not offered by school, school district, county, and region. Availability of vocational programs can easily be determined from this data. It is a fairly easy task to identify districts not offering a comprehensive mix of vocational programs. Thus, the basic data base is an important tool used by planners to initiate curriculum offering to students.

2. The second of four impacts of MIS on curriculum is the data collected to promote a balance between program offerings, student enrollments, and manpower needs. We have two important measures in Colorado that give planners, supervisors, and also local curriculum personnel data important to their planning.

   We, like a lot of you, have been working in a consortium arrangement with the Department of Labor on the Occupational Employment Survey. Thus far, we are getting estimates of employment by job title and by geographic region. In the near future, we hope that the projection matrix will be completed in Washington so that we can project the opening of labor needs one to five years hence.

Also, like most of you, we rely upon our follow-up system to act as an advance sensor to the delicate balance between job openings and qualified candidates available to fill those jobs.

Both of these measures supply our curriculum experts with objective data that will determine where and in what vocational specialty a curriculum should be initiated or discontinued.

3. The third of four impacts of MIS upon our curriculum is the data base which provides indicators of program quality. Colorado collects and supplies measures that are presumed to enhance program quality. Some of these measures relate to facilities, some to methods of teaching, and some to curriculum. These curriculum measures do supply the supervisors with information that will improve what goes on in the classroom. These measures act to flag major difficulties and problems. Corrective action is taken by the supervisors once the difficulties are identified.

4. The fourth and last MIS impact to be mentioned is to explain how accountability requirements influence curriculum decisions. MIS collects termination data and completion rates. Also reported are former students' opinions about the worth and value of their vocational program. These students' employment and wage records are collected. In addition, funding and expenditure data, facility utilization, and full-time equivalent staff-student data are reported. Each of these measures, either by themselves or in interface with others, are strong enough to modify or terminate a curriculum offering. State Board managers, planners and supervisors all use this data to monitor vocational programs.

As has been illustrated, Colorado's MIS does collect, process, report, and store information important to state and local curriculum experts. MIS data is applicable to four basic curriculum questions:

1. For whom is the curriculum designed? MIS does provide our planners with target population data which is a measure of the comprehensiveness of our curriculum offerings.

2. Where should curriculum be offered? MIS does provide our planners with the geographic dispersion and concentration of vocational curriculum offerings.

3. What is to be taught? MIS does provide our supervisors with data about the adequacy of a particular curriculum offering.

4. What specialty should be offered? MIS does provide our planners with job demand information.

5. How is the curriculum to be taught? MIS does provide state and local curriculum personnel with measures about the adequacy of what goes on in the everyday classroom situation.

Management Information Systems for Curriculum Improvement in Washington

by Arthur A. Binnie*

In Washington State, MIS is out and PIP is in!

Blasphemy you say! MIS is the heart or motherhood of a way to improve vocational education.

Certainly MIS is important to us, but more important in my home state is total performance improvement in curriculum development and in management of all vocational education matters. Management Information Systems (MIS) is a part of the total Performance Improvement Project (PIP).

My purpose is to share with you how Washington has (1) used the Management Information System or Performance Improvement Project to make curriculum development/improvement decisions, and (2) to discuss our system of managing curriculum improvement.

First we need to get two concepts in place so that what I share with you may be received on the same wave length I send it.

> Concept One: The Coordinating Council for Occupational Education (CCOE) is Washington State's sole agency for vocational education. We are an independent code agency with no direct operating authority over schools. In our state, the Superintendent of Public Instruction operates 316 school districts and five vocational-technical institutes, and the State Board for Community College Education operates twenty-six community college campuses. Since the CCOE does not operate programs directly, it must manage the operation through the other agencies to insure quality and quantity of vocational opportunities for the systems. Now, with that concept in mind, recognize that we (CCOE) manage the development of curriculum.
>
> Concept Two: Let's have a common definition of MIS and PIP for the purpose of this discussion.
>
> > MIS is the orderly gathering of necessary information for the purposes of analysis and making wise management decisions.

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*Arthur A. Binnie is the State Director of Vocational Education for Washington.

> PIP is the total process of analysis, identification of weaknesses in organization and operation, resulting in procedures to improve staff and agency performance (including MIS).

Our whole operational system is based on what we call the "Vocational Education Management Loop" (Attachment 1). Information gathering, or MIS if you like, occurs at two places in this loop. The point marked "Job to be Done" and the second point entitled "Organize Report."

Let's look at an example of the information systems at the "Job to be Done" point that helps us determine what curriculum to develop. (Attachment 2)

We call this element the "Vocational Education Forecast Process." While its prime purpose is to project future program growth or restriction, a secondary purpose is to identify (serve as an indicator) needed curriculum update or development areas.

The chart shows how it works. First, source data is collected from multiple agencies, both state and local. This data is then analyzed, programmed, displayed and processed, some by a computer system and some manually. The results of these activities are three reports: (1) Demand Per Year by Occupational Code, (2) Actual Employment Census, and (3) Projected Employment Levels. These reports, or really projections, are compared with vocational education enrollment data, completion data, and placement data. The results of these activities are planning recommendations to the Superintendent of Public Instruction and the State Board for Community College Education (the operating agencies) regarding needed expansion, needed restriction, and new developments of vocational programs by occupational code. The systems are then held accountable to plan their programs in relationship to the needs forecast.

This same data is provided to state staff specialists, including the Curriculum Management Center. It serves as base data for the Curriculum Management Center in implementing a number of activities. Decisions such as what curriculum may need updated, or what new curriculum may need developed, can be surfaced partly from this data.

That brings me to the second point of my presentation—the Process of Managing Curriculum Improvement.

One of the questions that was asked by the Ohio Center was, "What types of management information are useful in curriculum development?" (Attachment 3)

First of all, it needs to be understood that the management of curriculum improvement does not necessarily mean the development of curriculum. Management implies control over a given situation. To manage or control curriculum development and improvement within a state, we need to have several kinds of information.

1. Know the job to be done.
2. Inventory of curriculum on hand.
3. Inventory of curriculum in state under development.

4. Inventory of curriculum in regional networks.

5. Results of analysis of the job to be done against available curriculum. (Do they match?)

6. Availability of curriculum material.

7. Prioritize missing links (curriculum development needs).

8. Determine budget and most likely contractor for curriculum development.

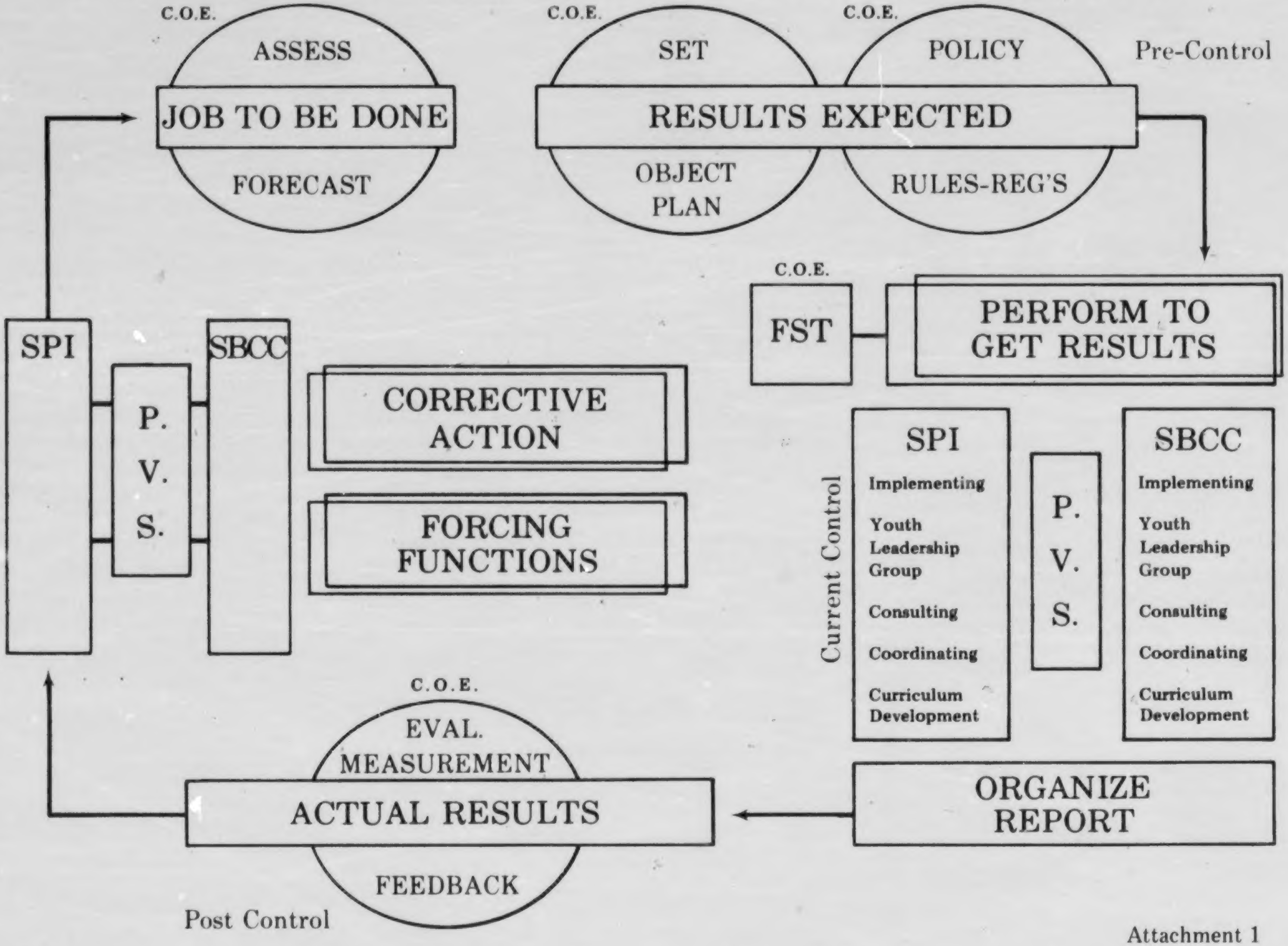
These types of information are at a rather high level. They seem to lack detail and/or specificity. Our system puts in gear subelements of MIS that lead to actual development of new curriculum or update of obsolete material. It includes specific job or task analysis, development of performance objectives, curriculum development procedures, evaluation criteria and field testing. The multi steps include MIS information gathering and decision points. Since this process is carried out under contract, our role is one of management and progress is measured at predetermined decision points. The format of the process we are working on should insure standardization of form.

Prior to this past year when we began our PIP program, we had, in my opinion, rather loose control on the development of new curriculum as well as loose control on the dollars budgeted to accomplish these tasks.

The chart (Attachment 4) entitled "1973 MIS Management" might be interpreted as MISS-Management. We had service area units in sole control of their own curriculum development needs. This organization provided multi-inventory, multi-decision-making, duplicate development activity, poor dissemination capability and minimum standardization.

Our 1974 PIP management system we believe will provide real improvement. Already we have reduced duplication in development, standardized a state inventory control system, and brought about cross pollenization between service area. The Curriculum Management Center has a hand on what's happening in curriculum development. The payoff will be in dollars saved and improved service to schools and teachers. And what it's really all about is better programs for kids.

VOCATIONAL EDUCATION MANAGEMENT LOOP



C.O.E.
ASSESS
JOB TO BE DONE
FORECAST

C.O.E.
SET
RESULTS EXPECTED
OBJECT
PLAN

C.O.E.
POLICY
RULES-REG'S

Pre-Control

C.O.E.
FST
PERFORM TO GET RESULTS

Current Control

SPI
Implementing
Youth Leadership Group
Consulting
Coordinating
Curriculum Development

P. V. S.

SBCC
Implementing
Youth Leadership Group
Consulting
Coordinating
Curriculum Development

ORGANIZE REPORT

C.O.E.
EVAL.
MEASUREMENT
ACTUAL RESULTS
FEEDBACK

Post Control

SPI
P. V. S.
SBCC

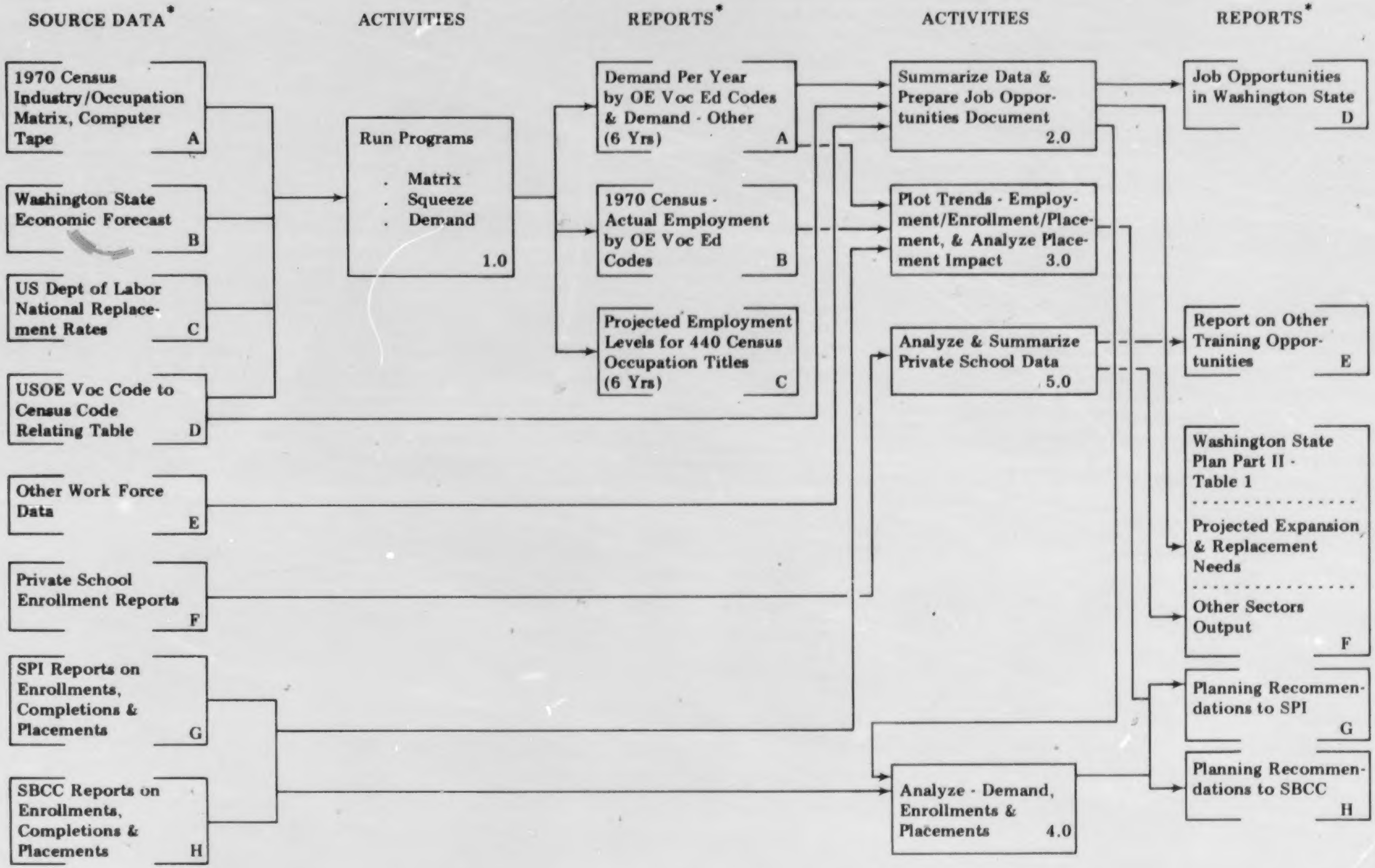
CORRECTIVE ACTION

FORCING FUNCTIONS

Attachment 1

February 26, 1974

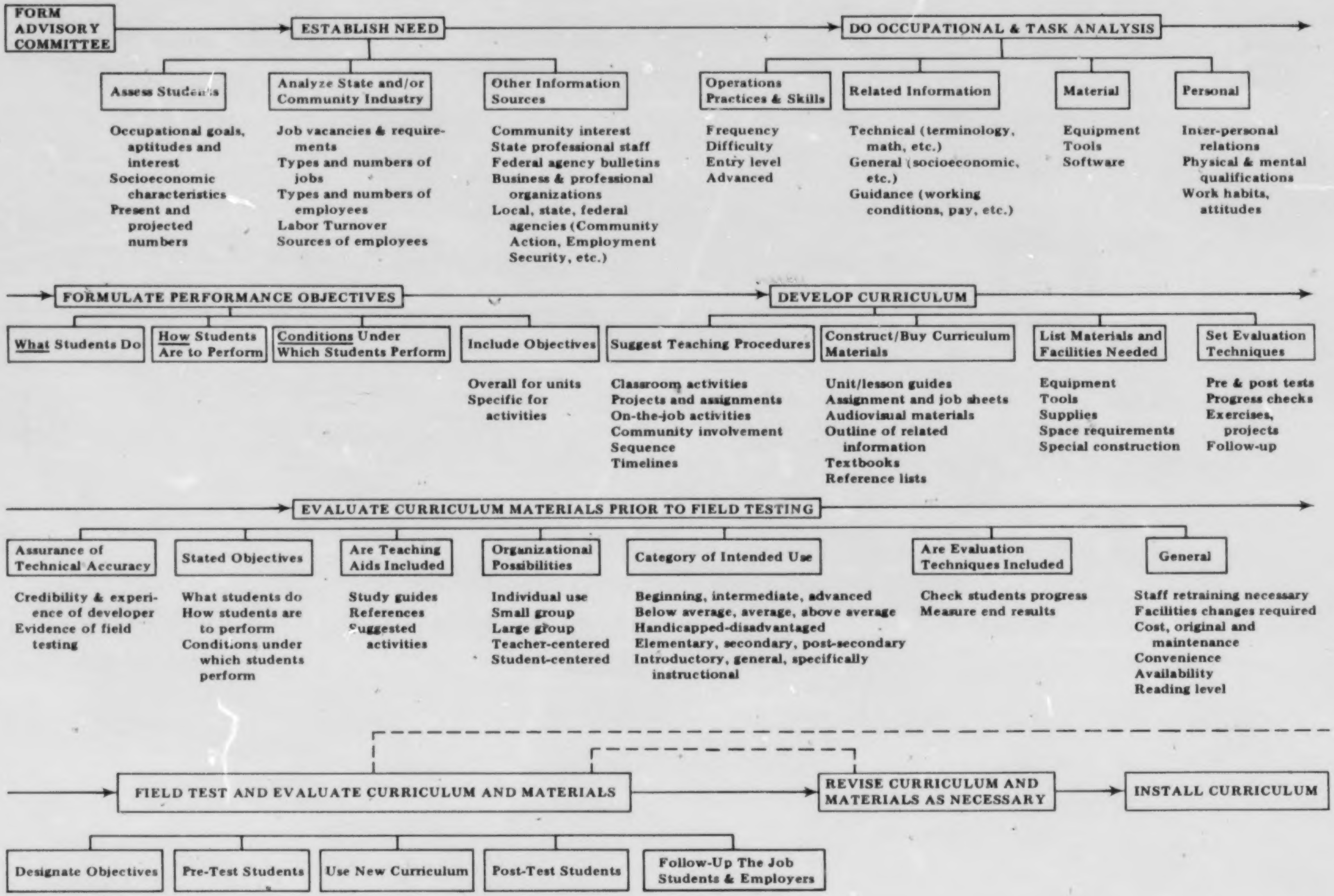
VOCATIONAL EDUCATION FORECAST PROCESS


SOURCE DATA*
ACTIVITIES
REPORTS*
ACTIVITIES
REPORTS*
1970 Census Industry/Occupation Matrix, Computer Tape A
Washington State Economic Forecast B
US Dept of Labor National Replacement Rates C
USOE Voc Code to Census Code Relating Table D
Other Work Force Data E
Private School Enrollment Reports F
SPI Reports on Enrollments, Completions & Placements G
SBCC Reports on Enrollments, Completions & Placements H
Run Programs . Matrix . Squeeze . Demand 1.0
Demand Per Year by OE Voc Ed Codes & Demand - Other (6 Yrs) A
1970 Census - Actual Employment by OE Voc Ed Codes B
Projected Employment Levels for 440 Census Occupation Titles (6 Yrs) C
Summarize Data & Prepare Job Opportunities Document 2.0
Plot Trends - Employment/Enrollment/Placement, & Analyze Placement Impact 3.0
Analyze & Summarize Private School Data 5.0
Analyze - Demand, Enrollments & Placements 4.0
Job Opportunities in Washington State D
Report on Other Training Opportunities E
Washington State Plan Part II - Table 1
Projected Expansion & Replacement Needs
Other Sectors Output F
Planning Recommendations to SPI G
Planning Recommendations to SBCC H

*Refer to the following pages for description of source data and reports.

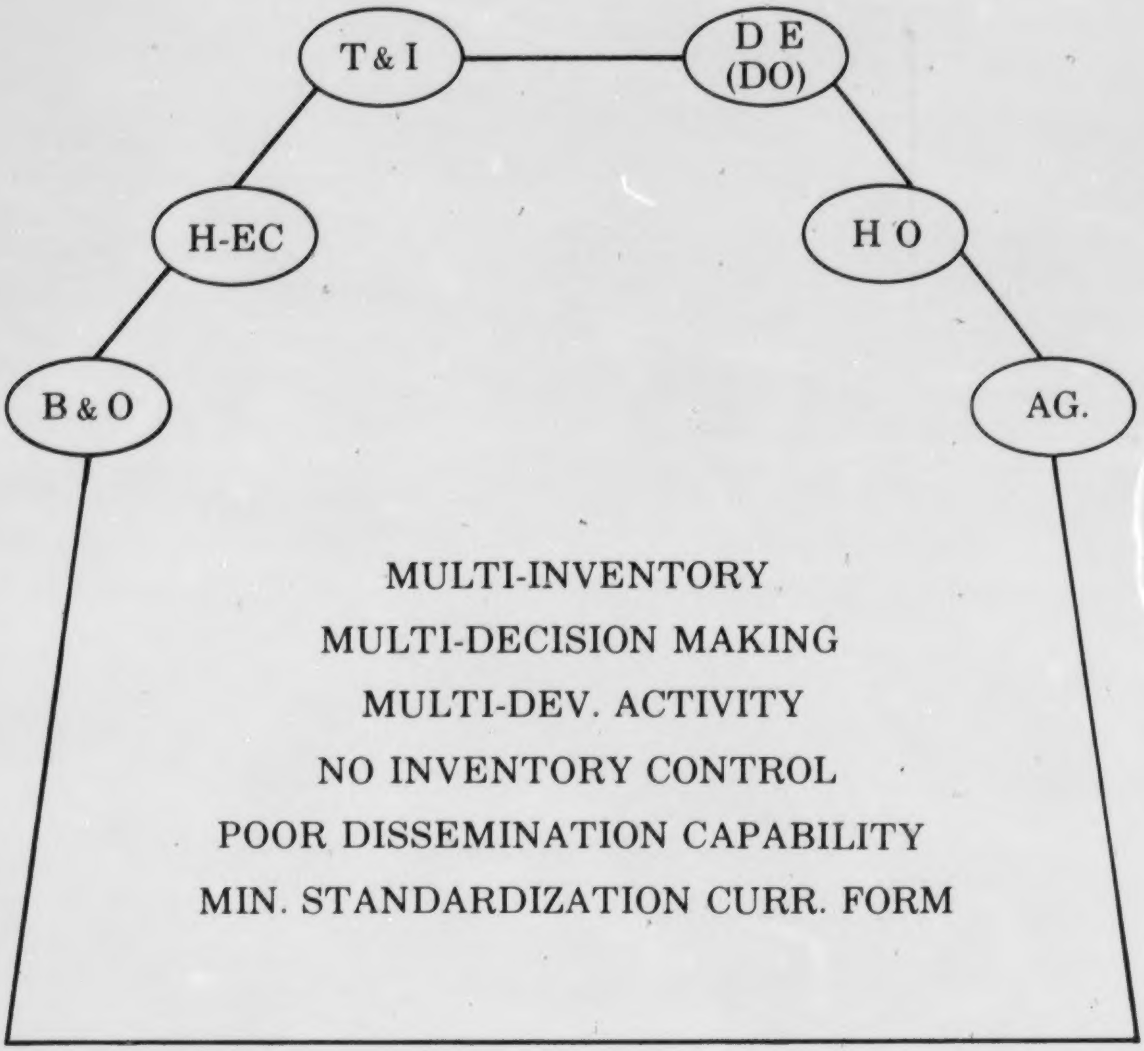
Attachment 2

CURRICULUM DEVELOPMENT


FORM ADVISORY COMMITTEE
ESTABLISH NEED
DO OCCUPATIONAL & TASK ANALYSIS
Assess Students
Occupational goals, aptitudes and interest
Socioeconomic characteristics
Present and projected numbers
Analyze State and/or Community Industry
Job vacancies & requirements
Types and numbers of jobs
Types and numbers of employees
Labor Turnover
Sources of employees
Other Information Sources
Community interest
State professional staff
Federal agency bulletins
Business & professional organizations
Local, state, federal agencies (Community Action, Employment Security, etc.)
Operations Practices & Skills
Frequency
Difficulty
Entry level
Advanced
Related Information
Technical (terminology, math, etc.)
General (socioeconomic, etc.)
Guidance (working conditions, pay, etc.)
Material
Equipment
Tools
Software
Personal
Inter-personal relations
Physical & mental qualifications
Work habits, attitudes
FORMULATE PERFORMANCE OBJECTIVES
DEVELOP CURRICULUM
What Students Do
How Students Are to Perform
Conditions Under Which Students Perform
Include Objectives
Overall for units
Specific for activities
Suggest Teaching Procedures
Classroom activities
Projects and assignments
On-the-job activities
Community involvement
Sequence
Timelines
Construct/Buy Curriculum Materials
Unit/lesson guides
Assignment and job sheets
Audiovisual materials
Outline of related information
Textbooks
Reference lists
List Materials and Facilities Needed
Equipment
Tools
Supplies
Space requirements
Special construction
Set Evaluation Techniques
Pre & post tests
Progress checks
Exercises, projects
Follow-up
EVALUATE CURRICULUM MATERIALS PRIOR TO FIELD TESTING
Assurance of Technical Accuracy
Credibility & experience of developer
Evidence of field testing
Stated Objectives
What students do
How students are to perform
Conditions under which students perform
Are Teaching Aids Included
Study guides
References
Suggested activities
Organizational Possibilities
Individual use
Small group
Large group
Teacher-centered
Student-centered
Category of Intended Use
Beginning, intermediate, advanced
Below average, average, above average
Handicapped-disadvantaged
Elementary, secondary, post-secondary
Introductory, general, specifically instructional
Are Evaluation Techniques Included
Check students progress
Measure end results
General
Staff retraining necessary
Facilities changes required
Cost, original and maintenance
Convenience
Availability
Reading level
FIELD TEST AND EVALUATE CURRICULUM AND MATERIALS
REVISE CURRICULUM AND MATERIALS AS NECESSARY
INSTALL CURRICULUM
Designate Objectives
Pre-Test Students
Use New Curriculum
Post-Test Students
Follow-Up The Job Students & Employers

Attachment 3

1973
MIS-MGT.



MULTI-INVENTORY
MULTI-DECISION MAKING
MULTI-DEV. ACTIVITY
NO INVENTORY CONTROL
POOR DISSEMINATION CAPABILITY
MIN. STANDARDIZATION CURR. FORM

PROPRIETORSHIP

Attachment 4

Management Information Systems for Curriculum Improvement in Oklahoma

by Francis T. Tuttle*

Before I indicate to you what a real contribution Oklahoma's MIS makes to curriculum development, I must tell you it isn't so great. We don't have a patented MIS system that cranks out materials which determine what curriculums should be developed, nor does it crank out materials and information specifically for curriculum development. Our system does and should, I think, provide some of the information for determining curriculum, and for determining priorities for the curriculum and systems being developed that we would like to add to our management system. These would further get into the matter of task analysis of different instructional programs and to store this information up so that it can be used for curriculums.

I guess I don't want to put any emphasis today on what our system is for cranking out information. I'd like to talk a little bit about the procedure for determining what curriculums will be developed in Oklahoma. I guess, as simply as I can put it and I think it ought to be put simply, that procedure is three items: (1) the program supervisors recommend what curriculums ought to be developed, our planners review their recommendations and apply the information that they have accumulated in our management systems. (2) Then they get together with the supervisors, they discuss it, and bring the recommendation to administration. (3) The administration finally approves what curriculums will be developed and on the basis of which one has priority. I could go through that process, but it involves of course such items that any state would involve: the number of students to be served, the number of teacher programs involved, the programs which are most outdated, and which wheel squeaks the loudest. None of the rest of you use that method, I'm sure, but it creeps into our method and then we also look at the dollars available, we look at curriculum-centered constraints, we look at personnel available to develop that particular curriculum, and after we have done all of these things, then we make a decision as to what we think can be developed. Obviously, I think that the most important single task after you have determined what are you're going to develop curriculum in is the task analysis situation. From that point on we have to move on into the development of the program.

I'd like to talk to you just a little bit about the method of cranking out curriculum. The general purpose of our curriculum and instructional materials center is to develop curriculum materials and that's the whole idea. I think that in America today we've got to give a lot more attention to the actual development, the cranking out, the providing of materials for teachers to use that can be and will be used. We have tons of so-called curriculum that's on the shelves of teachers in our state and I'm sure you do, and they don't use it. We've got to develop curriculum that they will use and

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*Francis T. Tuttle is the State Director of Vocational Education for Oklahoma.

I'm sure that we haven't developed our system to the extent that we'd like to, but we have been able to turn out curriculums that are being used in our state. The decision was made to produce, when we decided to develop curriculum, self-contained materials for the teacher and for the student and to develop and adopt a standard format for the development of curriculum. I'm convinced that if you're going to turn out curriculum in a state, that you have to design a way to turn it out, that you can't leave it to happenstance. As important as various universities and colleges are to the total development of vocational education, you can't leave all the curriculum development to them because they don't have the method to do it and they don't have the personnel to do it. Yes, they have people that know how to do it, but they don't have the people that are close to what ought to be in that curriculum and I have not seen in our state any of our universities that have a set-up that can obtain it. We felt that if it was going to be developed, we were going to have to do it ourselves, get it to people, and develop the system that could do it. I recognize that there are different ways of doing it and I recognize that had we chosen to put all of our money into a university and charge them with the responsibility and set up the criteria for doing it, that they perhaps could have done it. So I'm not saying that it is impossible to do it in a university setting, but I am saying that if it's going to be done there then I think that state departments are going to have to take a strong hand in it if it's going to come out in a useable way so that teachers will use it.

To sum it all up, a standard format was developed and every piece of curriculum that we developed follows the same format. There are certain advantages to doing this. First of all, your curriculum editors know what the format is and as they approach different curriculums it's easier for them to do it. Secondly, when typists understand the format, it's easier for them to type it. When your artists understand the format, it's easier for them to illustrate it. If you approach each one on a different basis in terms of format, you never develop the sophistication that in my opinion you ought to have. I think that the format for curriculum development is important. I also think that as important as developing the curriculum for the teacher is, developing the materials for the students is equally important. If you are really going to improve vocational education the single most effective way to do it is in terms of curriculum. In my opinion we haven't been putting enough importance, nor the share of our budgets into curriculum that we ought to. We haven't really set curriculum as a priority and in my opinion the number one priority should be to develop the curriculum and the materials that both teachers and students can and will use in order for the students to learn better.

That is the basis for curriculum development in our state. We have found that by doing this and by working at it we have begun to attract people from various industries that want to come in and help us, that want to come in and bear part of the costs of curriculum development. I want to publicly thank the ten states that are working with us on the regional concept. We believe that through this concept of the ten states working together in a consortium to develop the curriculum materials, that we're each saving each other's state money and that each state can use the materials that the other states have been developing. It makes so little sense the way we have approached curriculum in the United States and in vocational education especially. For the most part, every state has gone its own way. Teachers in my state are peculiar, I guess, but Byrl's State turns out curriculum materials and they write Ohio on it, and Oklahomans don't think it's any good. Well, the same thing is the case for Ohioans as far as Oklahoma-developed materials. Our new concept on the ten-state consortium is contributing all of each state's own developments to this effort. We hope to turn out materials that will carry the consortium label, and that's going to take away some of that pride of authorship from individual states, but it's also going to make all of the states feel like they contributed toward it. They will have contributed toward it because in this consortium effort each one of the ten states will have people that are going to sit in on determining what curriculum and how it's going to be developed. They will employ a manager who is skilled in the format and the development of curriculum. They will then get the most experienced teachers and industry people together to determine needs, and from that point they are going to develop curriculum. Each state will have an opportunity to come back, go over that material, and make suggestions before it comes back to the editors for final development.

I don't know how it's all going to come out, but I personally am pretty excited about the whole approach of ten states getting together and attempting to develop curriculum for all of the ten states, and of course the other forty are welcome to it. Maybe if we don't have Texas labels or Colorado labels or Washington labels on the material, it will be more accepted across state lines. It will be the Midwest Regional Curriculum Center.

At any rate, back to my subject, we in Oklahoma have Management Information Systems to give us information. If anybody has people that are drawing X's and O's and lines and paths and showing critical paths, we do. We draw just as many as anybody. Our MIS system has been in operation for six years. We believe that we've had enough experience with our system of determining what jobs are available and what our output is that we can accurately forecast the kinds of training programs that we ought to be developing in our state. We recognize that there are still some problems with it, but it is accurate enough that in six years we have not made a major forecasting disaster. I believe the system is accurate enough and I don't think we'll ever get a system that can be completely validated because this thing is too big and there are too many variables. I believe that the matrix the BLS is developing may work in large populations, but it won't work in sparse populations. It won't work as Byrl indicated in those areas where there are not many jobs. You're going to have to do that through special searches and study. But by using all these methods, I think we can do an accurate job of forecasting what jobs we ought to be training for, and when we do that and use the information in developing training programs, then that directly contributes to the kind of curriculum that we ought to be developing.

I would encourage all of you as you work with your curriculum development personnel—get them together and let's develop several curriculum consortiums in this country, and let's start really turning out useable curriculum materials that our teachers can and will use.

Section Four:

Curriculum Changes and Improvement in Local Education Agencies

Procedures for Implementing Curriculum Changes in Local Educational Agencies

by Ralph W. Tyler*

During the past ten years educational literature in America has contained an unprecedented amount of discussion on the problems of implementing new educational programs, getting new curricula adopted, speeding up innovations in education and other similar topics. Often, the speed with which new products are accepted and purchased by the public is compared with the slow rate of change in educational practices, with the implication that if only educational leaders used the techniques of industry, improvements in educational practice would proceed much more rapidly. Another favorite comparison is the nearly instantaneous success of the Agricultural Extension Service in getting hybrid corn grown by American farmers with the slow and limited progress in the adoption of a new curriculum or a new technology by teachers. These analogies should be critically examined, for I believe that the differences between the practice of education and farming or selling consumer goods make these comparisons not only unsound, but misleading so that we in education overlook some of the chief factors that must be considered in the implementation of an educational program.

Unique Characteristics of Educational Practice

One purchases a new consumer product when one believes that it will (1) furnish direct gratification or satisfy a desire or meet a recognized need, (2) the requirements for consuming it or using it are within one's present abilities or can be readily learned, (3) the time and effort required to consume it or use it will not interfere with other uses of time and effort which one considers more important, and (4) the cost can be met without sacrificing something one considers more important. Most producers of consumer products are well aware of these essential conditions and focus their product development on satisfying these conditions and their distribution efforts both in identifying consumers whose desires and abilities are appropriate for the product and in advertising them asserts or explains that the product meets all these conditions. They have found that selling efforts are futile when directed toward persons for whom these conditions are not present. Home television sets, for example, went like hot cakes because most people find gratification in viewing the actions of others, and most people want more communication with the wider world. Furthermore, the sets that were sold in large numbers could be easily turned on and tuned; they could be viewed when time was available; and their cost was not prohibitive.

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*Ralph W. Tyler is Director Emeritus for the Center for Advanced Study in the Behavioral Sciences, Science Research Associates.

However, when this analysis of the widespread sale of a consumer product is applied to the adoption by the teacher of a curriculum design or a teaching procedure, both similarities and differences are noted. Conditions (2), (3), and (4) are similar. Most teachers will not try to use an educational practice that appears to require certain competences that they do not believe they possess or can readily learn. Most of them will not whole-heartedly accept a practice that requires time or effort that they believe will interfere with other uses of time and effort that they consider more important and they will not attempt something the cost of which prevents obtaining something else they consider more important.

The most obvious respect in which the analogy is inappropriate is in condition (1). Teachers do not usually adopt a curriculum design or an instructional procedure because it furnishes them direct gratification. Most teachers do not view themselves as the consumers of educational products and practices. If one wants to use the term consumer in this connection, the student is the consumer. The teacher's motives in considering innovations are more varied and complex than those usually involved in connection with consumer products. In this respect, the farmer's adopting hybrid corn may be a better analogy.

In examining the situation of the farmer, there are some similarities with teachers, but also some differences. Most farmers, like most teachers want to be successful and are attracted to things that appear to help in their success. But the farmer's idea of success is more clearly seen and defined than that of teachers. To most farmers, success means producing more and increasing income. The procedures of the agricultural extension agent are focused on these interrelated goals. From the Experiment Station, or other reputable source of knowledge and invention, an improved practice is selected such as the use of hybrid corn. Then, the extension agent finds one or more farmers willing to grow hybrid corn on selected plots so that neighboring farmers can see that these plots are producing markedly more than those acres on which other corn has been planted. These are called result demonstrations. The farmers can see for themselves that hybrid corn gives much larger production of corn for the market or the feed lot.

The extension agent also arranges for methods demonstrations, ways of showing farmers how the improved results were obtained. The widespread adoption of hybrid corn is easily explained. Farmers want to produce more. They can see that hybrid corn produces more. They can see that the use of hybrid corn doesn't require skills that they cannot quickly learn. It takes little more time and energy and the costs are not excessive.

The motivation of teachers is more complex partly because their work cannot usually be guided by such clear evidence of success as the number of bushels of corn a plot produced. In interviewing teachers, I find that they are varied in their ideas of what indications they use in judging their success, including such things as how well they are following the model of teaching that they were taught, the favorable attitudes of students and of parents, the approval of the principal and of other teachers, the degree to which a problem or difficulty they have been experiencing is lessened, how well they are using the ideas recommended in the professional literature they read, etc. Since one cannot assume a simple dominant motive among the teachers in a local school in developing a plan for implementing change, it is helpful to identify the criteria that the teachers involved utilize in channeling their motivations and guiding their efforts.

In schools, as well as on farms, the actions taken and the procedures followed are largely determined and controlled at the local level. The state cannot effectively order a curriculum design or a teacher's procedure to be implemented, just as a state official will not get results by telling the farmers what they must produce and how to do it. Hence, the positive influence of state leaders is not through directives, nor regulations, but through explanations, persuasions, assistance to local personnel in solving problems that are perceived locally and the like.

However, although the initiative for action and change in schools and in farms are both located at the local level, most farmers are independent operators, so that the decisions and implementing actions are largely the responsibility of a single person or family. In schools, the decisions and actions are both individual and group ones, very closely intermingled. A group of teachers in a school may collectively decide to adopt a particular curriculum design but each individual teacher interprets the meaning of the design and the teaching procedures involved. This makes the problem of actual implementation more complex since certain group decisions must be made and, in addition, individuals will often need assistance in interpreting the decision and working out their individual responsibilities and tasks. If state leaders are to help local schools implement curriculum and instructional improvements, they must be prepared to assist with group deliberations and decisions as well as with individual thought and action.

Another, very important difference which is frequently overlooked is the difference in the source of status of the farmer and the teacher. The farmer's status in making decisions and implementing them derives from his control over the farm as owner, renter, or manager. He does not lose status by simplifying his work. In fact, most farmers consider simplification and labor-saving that may accompany a new procedure very desirable outcomes. On the other hand, the teacher derives his status from his professional control of the teaching process. He does not own the school nor rent it, nor manage it. He is considered a professional to the extent that he follows teaching-learning procedures that are sanctioned by the professions. Many teachers interpret this characteristic of a profession very comprehensively. Many believe that as professionals, they are ultimately responsible for choosing educational objectives, designing the curriculum, planning the teaching procedures, producing and/or selecting the instructional equipment and materials, carrying on the teaching activities, appraising the student's progress, and conferring the rewards for students who are successful in learning. Those who view their role as all encompassing are likely to perceive assistance from state leaders as threatening their professional autonomy and denigrating their activities. In such cases they are likely to resist rather than to seek help from the state level.

Finally, a very different characteristic of the school from the farm is the fact that complex human learning results from the active behavior of the student which he consciously directs. Students cannot be forced to learn. In contrast, the hybrid corn has no control over the fertilizer applied and the cultivation given the land. The student can choose whether or not he attends to the matters presented by the teacher and really makes an intelligent effort to carry on the learning tasks assigned. It is unfortunate that in many reports of research on classroom learning, the term "treatment" is used to refer to the teaching-learning activities. This term gives the impression to many people that a teaching procedure consists merely of selecting a particular "treatment" to give the student rather than emphasizing the complex human interactions involved in the teaching-learning process. The process actually includes helping the student to channel his motivation toward the the desired learning, to clarify what he is to learn, to develop or maintain his confidence that he can carry on the learning tasks, to stimulate his practice, to reward successful efforts, to diagnose unsuccessful efforts, and to try again. The difference between the activities involved in planting and cultivating a crop and in working with students in the sensitive and dynamic way required for the give-and-take of intelligent learning behavior is a profound one that must be considered in developing a strategy for implementation at the local level. New designs, new equipment, new materials, descriptions of new procedures will not alone suffice to operate a new program. Teachers will need understanding and successful practice in order that students may be taught rather than told.

In brief, certain important characteristics of the practice of education are sharply different from those where innovations have been quickly adopted and become widespread. The learning process is the heart of educational practice and the teacher in the classroom bears the responsibility for stimulating and guiding it. The motivation of teachers in their work is more varied and complex than that of consumers, businessmen, or farmers. Some of the significant results of teaching efforts are not immediately discernible and clear cut, hence they are less useful in guiding curricular and instructional decisions than are the results of adopting a practice in agriculture or business. Curricular and instructional decisions are largely made in the local school and these decisions include both those made by the teachers collectively and individually. The teacher, as a professional, feels primarily responsible for the teaching-learning process including some important parts of curriculum planning and development. From this viewpoint, state leaders may be viewed as intruding on the teacher's authority and a threat to his autonomy. Finally, the student is the real client of the educational system and the ultimate object of efforts to improve educational practice. He cannot be forced to learn and his autonomy must also be respected. State leaders have a difficult task in constructively influencing and assisting in the implementation of curriculum changes.

Studies of Successful Innovations

Although few investigations have been made of the ways in which state leaders have aided implementation of new educational programs in local schools, a number of studies of the spread of innovations furnish indirect indications of steps state leaders can take. Henry Brickell's study of the dynamics of instructional change[1] is particularly relevant. His investigation of thirty-one school systems in New York State sought to discover how decisions about instructional change at the local level were made. The following interpretations he makes of his findings suggest tasks for state leaders. He states:

> "Parents and citizens groups in most communities do not exert a direct influence on the adoption of new types of instructional programs, but their influence is decisive when exerted," page 20.
>
> "The Board of Education in most communities is not a strong agent in determining the path of educational innovation, but its influence is decisive when exerted," page 21.

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[1] Henry M. Brickell, *Organizing New York State for Educational Change*, State Education Department, Albany, 1961.

"New types of instructional programs are introduced by administrators. Contrary to general opinion, teachers are not change agents for instructional innovations of major scope. . . .

"The statement above is made not about classroom practice but about new types of instructional programs which usually tough several teachers and which may require breaking up old work patterns.

"Instructional changes which call for significant new ways of using professional talent, drawing upon instructional resources, allocating physical facilities, scheduling instructional time or altering physical space - rearrangements of the structural elements of the instruction - depend almost exclusively upon administrative initiative. . . .

"To understand this, it must be remembered that the teacher is not an independent professional. He is instead a member of the staff of a stable institution. . . .

"The complexity of group decision-making and the difficulty of a peer group's choosing among several attractive possibilities (or, more exactly, possibilities with different degrees of attractiveness for each member) are well known. The value of leadership and the uses of authority in such a situation are also well known. An administrator is powerful because he can marshall the necessary authority - if not the necessary leadership - to precipitate a decision. . . .

"Classroom teachers can make only three types of instructional change in the absence of administrative initiative: (1) change in classroom practice, (2) relocation of existing curriculum content, and (3) introduction of single special courses at the high school level." pages 22-24.

"Professional suspicion about the value of innovations in other school systems, and even about the sincerity of other innovators is a widespread and serious inhibitor of educational change. . . .

"There is a strong disposition among administrators and teachers to suspect that many of the new programs which come to their attention are of little educational consequence - froth without substance - and many have been concocted by the sponsoring school largely in an effort to gain outside recognition. . . .

"Many visits are undertaken for the purposes of discovering that the new program in a neighboring school is no better - and perchance a trifle worse - than what the home school is already doing. Such a discovery is deeply satisfying. It means that the local program to which administrators and teachers have devoted their daily labor is superior to an outside program which is being hailed as 'advanced' . . . more important, it has now become clear that local children have been well served all along," pages 26-27.

"The most persuasive experience a school person can have is to visit a successful new program and observe it in action. Speeches, literature, research reports and conversations with participants outside the actual instructional setting are interesting but relatively unconvincing. . . . Anything abnormal, unreal, or artificial in the circumstances surrounding an observed program - that is to say anything appreciably different from conditions in the visitor's own school system - can rob a visit of persuasive effect," Pages 27-29.

"The most successful innovations are those which are accompanied by the most elaborate help to teachers as they begin to provide the new instruction. . . .
It became vividly clear during the survey observations that the key to successful innovation is assistance to the teachers," page 31.

"Soon after an instructional innovation has been introduced, judgments begin to be made about its success. Regardless of the nature of the change or the type of school setting in which it is made, one particular evaluation procedure overshadows all the others.

"Instructional innovations are almost always evaluated by observing the reactions of the students while they are receiving the new instruction. In the eyes of the practitioner, no other evidence outweighs student reaction as a measure of success," page 33.

"The attention, encouragement, and recognition given to teachers by people outside the classroom during the introduction of new programs are among the strongest causes of their success," page 35.

The emphasis Brickell's findings give to the teacher in adopting innovations is similar to the reports of several other studies. John Goodlad and his colleagues observed a considerable sample of classrooms that were avowedly using some of the new curriculum programs. In the case of the new science courses, they found that about two-thirds of these classrooms were using the new materials as they used the former science textbooks - pages to be assigned on which students recited what the books said. Thus, in spite of the new courses being designed to stimulate and guide student inquiry in science, their use was fostering student memorization.

In the Eight-year study forty years ago, we invented summer workshops in order that teachers would have the time and opportunity to gain the understanding, the competence, and the confidence required to implement new curricula. We also instituted conferences of administrators so that their understanding and actions would furnish stimulation and support for the new programs. In connection with the workshops demonstrations were arranged to enable the teachers to see for themselves what teaching the new programs involved. They, like the teachers in New York State, were skeptical of the honesty and accuracy of published reports of "better programs." They wanted to see for themselves and judge for themselves.

Developing Understanding of Curriculum Changes

Intelligent implementation by local school personnel requires clear understanding of the rationale for the curriculum changes. If local teachers and administrators cannot answer to their own satisfaction such questions as the following, they are unlikely to have strong motivation to change. What are the inadequacies in our present curricula? Are there new problems that we must solve? What basis is there for believing that the new curricula will take care of some of these inadequacies and/or solve some of our new problems.

In many efforts to implement new educational programs, the discussion is centered on the superior quality of the new without clarifying the need for anything new. Essentially, there are three areas in which teachers and administrators should understand the rationale. One is the curriculum objectives, a second is the students to be served, the third is the learning program through which the objectives can be attained. If the new curricula involve educational objectives that are new to the local school, teachers and administrators need to know what these new objectives are and why new ones are necessary. Are there new job areas for vocational education which require new objectives such as in the delinquency rehabilitation field, the childcare field or the engineering technician field? Are there new notions about what students can learn that would give them greater competence in their work? Is there evidence that students need to learn certain things that have not been included in the curricula heretofore? Do some of these fields demand new skills or knowledge that were not required in the past?

If the new curricula are planned for new kinds of students to be served, teachers and administrators need to understand what these new kinds are, such as youth from homes of poverty, older workers, females, members of minority groups. They also need to have answers to such questions as: Why is it desirable to serve these new kinds of students? How do we find them? Can we justify a selection process for admitting them to a program? What should it be?

If the new curricula involve new learning programs, teachers and administrators need to understand answers to such questions as: Why is a new learning program necessary? What are the learning principles that guided the design of the program? What evidence is there that students learn effectively through the program? How much training is required for a teacher to carry on this program?

When teachers and the administrators involved can answer questions like these to their own satisfaction, a sound basis has been developed for implementing the curriculum and an important factor in motivation has been established.

State leaders can stimulate and assist local educational agencies to make local studies that can furnish some of the evidence of needs in curriculum changes at the local level. Local leaders can find out for themselves about such relevant matters as new job opportunities, new types of students in the community that are not now being served, the job history of graduates of present local programs, the evaluation by graduates of present programs. When they obtain significant findings locally they are more likely to understand and appreciate the need for curriculum changes.

When teachers and administrators can answer to their own satisfaction questions like the examples above, a sound basis of understanding has been developed for implementing curriculum changes, and an important factor in motivation has been established. Of course, these questions will not all be answered before implementation begins, but they should be given attention from time to time as the adoption of curriculum changes proceeds.

The Climate to Support Changes

All of us are greatly influenced by the attitudes of those around us whom we respect. Teachers and administrators are no exception to this generalization. There are many examples of innovations being adopted when several teachers attended workshops from the same school while individual teachers returning to their schools did not implement the curriculum change. The attitudes of peers of teachers and administrators toward particular curriculum changes are important influences and efforts should be made to develop favorable attitudes among them.

Another important source of support is the local board of education. Boards can provide an important stimulus to change by official actions in approving proposals to send teachers to workshops and other in-service programs and in endorsing certain curriculum changes. They can also assist by favorable oral comments at board meetings. The influence of parents and citizens groups is not often exercised on curriculum innovations, but, as Brickell found, "it is decisive when exerted." Furthermore, the reported experience of others verifies Brickell's finding that "the attention, encouragement and recognition given to teachers by people outside the classroom during the introduction of new programs are among the strongest causes of their success." These points indicate clearly the importance of building support for innovations among teaching groups, administrators, boards of education and parent's and citizen's groups. In such a supporting climate, administrators and teachers develop motivation to make significant curriculum changes.

Gaining Competence and Confidence

One may recognize the need for certain changes and may sense the support of colleagues and the public if these changes are made but one may also be uncertain whether he can carry on a different program, and thus be unwilling, or at least hesitant to get involved. Brickell reports: "It became evident during the survey interviews that proposed innovations arouse feelings of insecurity and inadequacy in many teachers. The more radical the change in content or method, the more likely teachers are to feel inadequate. . . ."

"Schools which were sensitive to those anxieties relieved them by providing teachers with information, reassurance, the promise of help and direct experience in teaching the new program," pages 30-31.

In the eight-year study, the need for workshops where confidence and competence could be gained was apparent by the end of the first year. The demonstrations, the readings and discussions, and teacher participation in developing instructional units were very helpful in making clear to the teachers what was involved in planning as well as carrying on a new curriculum program. They gained confidence as well as competence as they took increasing responsibility in working out plans and materials and trying them out in demonstrations.

In my recent consultative activities in America and abroad, I have noted again and again that teachers did not interpret most helpfully and appropriately plans and learning materials developed for their use until they themselves had participated in the various steps involved in curriculum planning and instructional development. Then, they were much clearer about the purposes of particular programs and units and how they could be constructively used. When the problem of designing a means of managing complex learning activities of classroom, laboratory and shop arose, the teachers in the workshops were able to design management systems they could employ while they found it difficult or impossible to manage the activities in ways the original designers had proposed.

This leads me to state a seeming paradox that I have formulated from my experience in developing new curricula. If a curriculum plan and all its components appear to be complete it is likely to be rejected or sharply changed by the teachers for whom it was intended. If, on the other hand, the curriculum plan is a rough one and there are several parts left to be constructed, the teachers are likely to want to work on it and to develop something from it that they can use. This experience has led me to emphasize the role of the teacher in curriculum development while at the same time recognizing the roles of the professional curriculum designer and those who produce materials of instruction. If possible the workshops or other in-service experiences should help each teacher work out a curriculum that is in some respects uniquely his. A professional teacher does not want to be a purveyor of ready-made garments. To change the metaphor, he wants to build his own hi-fi from components and a system design rather than to buy a cabinet model.

A Strategy for Implementation

The term strategy in social programs refers to a statement that includes long-term goals, the ways the goals are to be reached, and an operating plan for the current year, or other planning period. In curriculum implementation, all too often a comprehensive strategy has been lacking. As a result, goals were set up that were either too ambitious or not related to the time that is required to achieve them. The means employed are often only partly if at all adequate to attain the goals. The operating plan for the current period has either been lacking or was unrealistic in the estimate of resources required, including personnel, materials, time, and money. Frequently, the assumption is made that all of the local resources for in-service training will be available for implementation of curricula in one field when, in fact, most local agencies divide the resources among several fields.

The development of a statewide strategy is best undertaken after state leaders have helped several local agencies to develop their local strategies. This experience is valuable because the estimate of personnel, consultative assistance, materials, money, and time required to implement the curriculum changes at the local level furnish information useful in working out a state plan especially with regard to the number of local districts with which state leaders will be able to work each year and the resources the state will need to furnish each district in order to effect some implementation. It is likely that state strategies based on this experience in helping local districts plan will be more realistic with respect to goals that can be attained, the time required, and the resources to be obtained and made available. Even with this preliminary experience the state strategy will usually need updating annually to take into account the results of the previous years work and experience.

Resources Provided at the State Level

Although the major tasks of implementing curriculum changes must be carried on at the local level, the contributions from state leaders are not only significant, they can also be decisive.

The most important one is consultative help to local agencies in planning and implementation. The second is the preparation and publication in various forms for various audiences in the state of the rationale for these curriculum changes. With wide understanding on the part of the public and educational groups of the needs for these changes, the reasons for developing them and the values to be expected from adopting them, the local leaders have a climate in which their efforts are likely to be encouraged. These materials should be sufficiently interesting to attract and hold the attention of members of the audience for which they are intended, and the explanations should be straightforward, and convincing. Where possible, examples should be given to convey the reality of the programs being implemented.

The third contribution from the state levels is to see that there are ample opportunities for teachers, preferably teams of teachers, to work on plans and materials and thus to gain the competence and the confidence required for successful implementation. Most school districts are not alone able to establish workshops or other similar institutions. Most colleges and universities have not focused the various resources needed for helping teachers and administrators implement curriculum changes. State leaders can exercise authority and responsibility to bring these kinds of workshops into being.

The fourth contribution is to identify, or, if necessary, establish demonstrations of successful implementations and encourage local groups to visit them. Brickell's finding the great value of demonstrations in natural settings where visitors could see for themselves indicates the importance of this resource. The state leaders can be more objective than local agencies in selecting demonstration centers and helping them serve as vivid examples.

The fifth contribution of the state is to establish or see that there is available, a clearing house of materials useful in implementing curriculum changes. These materials include information sources, resource units, laboratory and shop materials, and other examples of pupil learning materials and teacher plans. The previous emphasis upon teachers designing things for themselves did not imply that they could not, and would not use constructively what others have done and made. As one develops things for himself, he sees more clearly the helpfulness of things others have developed and is likely to use some of them in constructive ways.

Finally, state leaders can help to recognize and reward successful implementations. The more objective the appraisal and the wider the circle of those who recognize an achievement the more the recipient appreciates the recognition and the greater the stimulus to continue the work. The state should take leadership in identifying promising innovations, in evaluating them and in publicly recognizing and rewarding successful implementations. One of the reasons for the ephemeral character of many innovations is the short time in which the public shows interest in them. State departments, too, have their current favorite programs which are shortly succeeded by other ones. A realistic implementation strategy will span five-ten years and during that time, local agencies need to give attention to these curriculum changes. The support of long-term efforts involves long-term recognition and reward as well as long-term assistance. The state leaders have an important responsibility in this.

Other Factors in Implementation

When I was asked to prepare this paper, five subtopics were suggested for my comment. The first of these was: the effect of organizational patterns on the implementation of curriculum change. I have found no reports in the literature of studies of this question.

The second topic was: who are the change agents and how do you identify them and work with them? The term change agent is widely used in the sociological studies of innovation. A change agent is one whose influence is high within the group being studied and whose example is often followed. There are influential persons in most if not all social groups, and they are most easily identified by observation and discreet interviewing. Involving such influential persons in the implementation of curriculum changes is likely to increase the rate and the extent of adopting of innovations.

The third topic was: the effect of in-service personnel programs on the implementation of curriculum change. This is discussed at length in the preceeding sections. The fourth was: the effect of curriculum development strategies on curriculum implementation. This topic is discussed indirectly at several points, and the series of sections devoted to steps that state leaders can take in a proposed general strategy.

The fifth topic was: models of "good" programs for curriculum implementation. If model refers to the outlining of a general procedure for curriculum implementation, this is discussed at length in the foregoing material. If, on the other hand, model refers to examples of effective implementation, I recommend that you review the various studies, like that of Brickell to note the programs that were identified as effectively implemented. However, no model can be followed in detail in another situation. Each state will need to develop its own model for facilitating the implementation process at the local level.

The points where state leaders can exert constructive influences are: (1) in developing a rationale for the particular curriculum changes and helping local school personnel understand it, (2) in helping to build a climate to support changes, (3) in helping teachers and administrators to gain competence and confidence to implement the changes, (4) in formulating a strategy for implementation and (5) in providing helpful resources at the state level. State leaders can exert a powerful influence on implementation of curriculum changes in local educational agencies, not by directives and regulations but by facilitation of local decisions and actions.

The Role of the State Vocational Agency in Curriculum Improvement for Local Education Agencies

by Nevin R. Frantz, Jr.*

The Constitution of the United States has delegated, by default, the responsibility for public education to state governments. Within each state government, an agency has been designated to provide educational policy and programs for the needs of its constituents. The administration of vocational education programs, within the state educational agency, is provided by a state director through a division or departmental staff. Although these divisions or departments vary in size and organizational arrangement, their roles and functions remain similar. According to Swanson (1971), these functions include:

1. Establish goals and objectives.
2. Perform, encourage, and disseminate research and evaluation studies.
3. Plan and develop pilot projects, new curricula, innovative activities, and immediate and long-term programs.
4. Provide services such as fiscal auditing, program standards, liaison with other state and federal agencies, credentialing vocational teachers, and consultant services.

Traditionally, state divisions of vocational education have provided program and certification services, however, recent passage of federal legislation has created an opportunity to assume other roles and provide additional services for local educational agencies. One of these roles is the development, installation, and evaluation of curriculum improvements for vocational and career education programs. Sherwood Dees (1971), director of vocational education for the state of Illinois, contends that:

> State education agencies have typically confined their interests to personnel and facilities standards, and only incidentally have they endeavored to modify curriculum and instruction. Yet, the greatest unmet need in American education today lies precisely in the improvement of the instructional program; specifically, the educational challenge of the seventies is preparing youth for the world of work.

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If the desired outcomes of curriculum improvement actually emerge as observable results, it is imperative that a management system be developed and used in controlling and directing the available human, material, and financial resources. It is the purpose of this discussion to present a management system for fulfilling the role of the state vocational agency in curriculum improvement.

Organizational and Administrative Systems Involved with Curriculum Improvement

Before presenting the managerial system, it is important to examine the organizational and administrative systems that are involved with curriculum improvement in vocational and career education. An adaption of a model by Petit (1967), illustrates the complexity of any managerial system used to control and direct curriculum improvement activities. (See Figure 1.)

The model shown in Figure 1 suggests there are three levels in the administrative structure of an organization. The technical level is concerned with the actual production of a product or service. In the state department of vocational education, as depicted in the model, the curriculum developers represent the technical group who are involved with the task of preparing curriculum materials. Examples of this group may range from an individual teacher under contract to prepare a course outline, to an interdisciplinary team of experts at a university involved in developing an instructional system for a K through twelve career education program. In the local educational agency model, the instructional staff represents the technical level. This group is concerned with providing instruction to students using curriculum materials that may have been developed by another organization.

The organizational level coordinates the input of services and resources to the technical level. The manager at the organizational level must also relate the activities and output of the technical level with the institutional level as well as with other groups and organizations. For example, a curriculum coordinator in a state department, or the director of a curriculum materials center could provide fiscal management services for the technical group and disseminate information about activities of the curriculum developers to the state director, state supervisory staff, teacher educators, and teachers in the local school system.

The institutional level established policy and relates the activities and products of the organization to its environment. In a state department of education or a local school system, the board of education and the advisory council for vocational education would represent the institutional level. Their function is to receive input from societal forces in developing policy and relating the results of that policy to state or local citizens.

The outputs of the state department administrative system are the curriculum materials which are used by teachers in local school systems to prepare students with skills, knowledge, and attitudes required by society. The primary mission of the curriculum coordinator is the development, installation, and adoption of evaluated curriculum material by the local educational agency. In order for this goal to be accomplished, a great deal of articulation and integration must occur within the state department of vocational education as well as between the state department and other organizations. The curriculum coordinator serves as the linking agent between the curriculum developers, the state director of vocational education, state supervisory staff, and advisory council for vocational education.

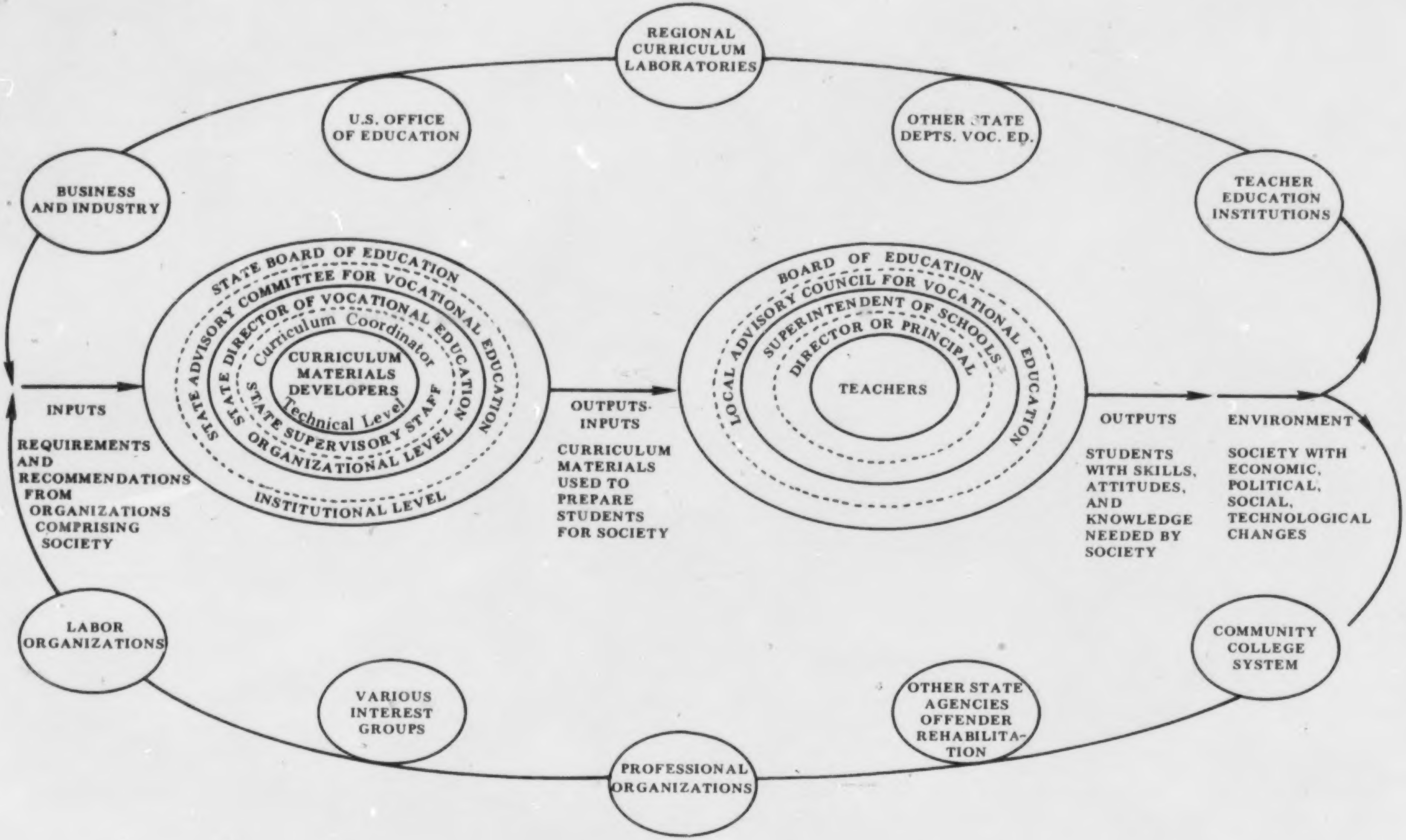
REGIONAL CURRICULUM LABORATORIES
U.S. OFFICE OF EDUCATION
OTHER STATE DEPTS. VOC. ED.
BUSINESS AND INDUSTRY
TEACHER EDUCATION INSTITUTIONS
STATE BOARD OF EDUCATION
STATE ADVISORY COMMITTEE FOR VOCATIONAL EDUCATION
STATE DIRECTOR OF VOCATIONAL EDUCATION
Curriculum Coordinator
CURRICULUM MATERIALS DEVELOPERS
Technical Level
STATE SUPERVISORY STAFF
ORGANIZATIONAL LEVEL
INSTITUTIONAL LEVEL
BOARD OF EDUCATION
LOCAL ADVISORY COUNCIL FOR VOCATIONAL EDUCATION
SUPERINTENDENT OF SCHOOLS
DIRECTOR OR PRINCIPAL
TEACHERS
INPUTS
REQUIREMENTS AND RECOMMENDATIONS FROM ORGANIZATIONS COMPRISING SOCIETY
OUTPUTS-INPUTS
CURRICULUM MATERIALS USED TO PREPARE STUDENTS FOR SOCIETY
OUTPUTS
STUDENTS WITH SKILLS, ATTITUDES, AND KNOWLEDGE NEEDED BY SOCIETY
ENVIRONMENT
SOCIETY WITH ECONOMIC, POLITICAL, SOCIAL, TECHNOLOGICAL CHANGES
LABOR ORGANIZATIONS
VARIOUS INTEREST GROUPS
PROFESSIONAL ORGANIZATIONS
OTHER STATE AGENCIES OFFENDER REHABILITATION
COMMUNITY COLLEGE SYSTEM

Figure 1. AN ORGANIZATIONAL SYSTEM FOR CURRICULUM IMPROVEMENT

In addition, the coordinator interfaces the state department with local school systems, teacher education institutions, professional groups, etc. To illustrate the linking agent role, consider a curriculum materials project being conducted under contract to the state department at one of the state universities. Two of the major tasks a curriculum coordinator would perform in this situation are: (1) providing information about the developmental activities and progress to the state director, supervisory staff, and advisory committee; and (2) working with the supervisory staff, local school systems, teacher education institutions, and the curriculum developers to prepare plans for using the curriculum materials in a pilot project.

Many of the organizations comprising the model shown in Figure 1 will be the direct recipients of the output (local educational agency, teacher education institutions, etc.) while other organizations (business, industry, labor, etc.) will indirectly receive the effects of the curriculum material in the form of student behaviors. As curriculum materials are used by teachers and students in a classroom or laboratory, they should be compared with prestated standards of performance. The results of this comparison should be provided as feedback to the appropriate administrative organization where adjustments and modifications can be made. Likewise, as students exit from programs using the developed curriculum materials, their skills, knowledge, and attitudes should be compared with societal needs and adjustments made accordingly.

The model shown in Figure 1 theoretically separates the three administrative levels and suggests that formal interaction between organizations occurs only by progressing through each level. In practice, the levels frequently overlap in their roles and often operate independently of each other. The informal relationships that occur in practice mean that an articulated, cooperative, relationship exists as opposed to formal, line authority relationship as depicted in many organizational charts (Parsons, 1960). For example, many actions and activities with vocational education teachers are often initiated under the direction of state supervisory staff and teacher educators without progressing through formal organizational lines of communication. This approach to organizational behavior will require management processes which span and link the various subsystems of the total organization (Kast and Rosenzweig, 1970). In this presentation, emphasis will be placed upon the managerial roles at the organizational level and in particular the role of a curriculum coordinator in planning, organizing and controlling the resources needed to develop, install, continuously evaluate and modify curriculum materials used by teachers of vocational and career education in local educational agencies.

A Managerial System

A managerial system for the coordinator of curriculum materials in a state department of vocational education is shown in Figure 2. Although other approaches may be suitable, the processes of planning, organizing, and controlling will be used in describing a managerial system for curriculum coordinators in a state department of education. The various organizations involved with curriculum are shown as providing input to the planning, organizing, and controlling processes. The planning process requires the specification of organizational objectives, as well as searching for and evaluating alternative means to achieve these objectives. Organizing involves staffing and implementation of the means selected for achieving the objectives. Controlling is auditing the means and subsequent products to assure its compliance with the plan (Young, 1966). The outputs are described as final decisions and end products resulting from the application of each process. Feedback of the output,

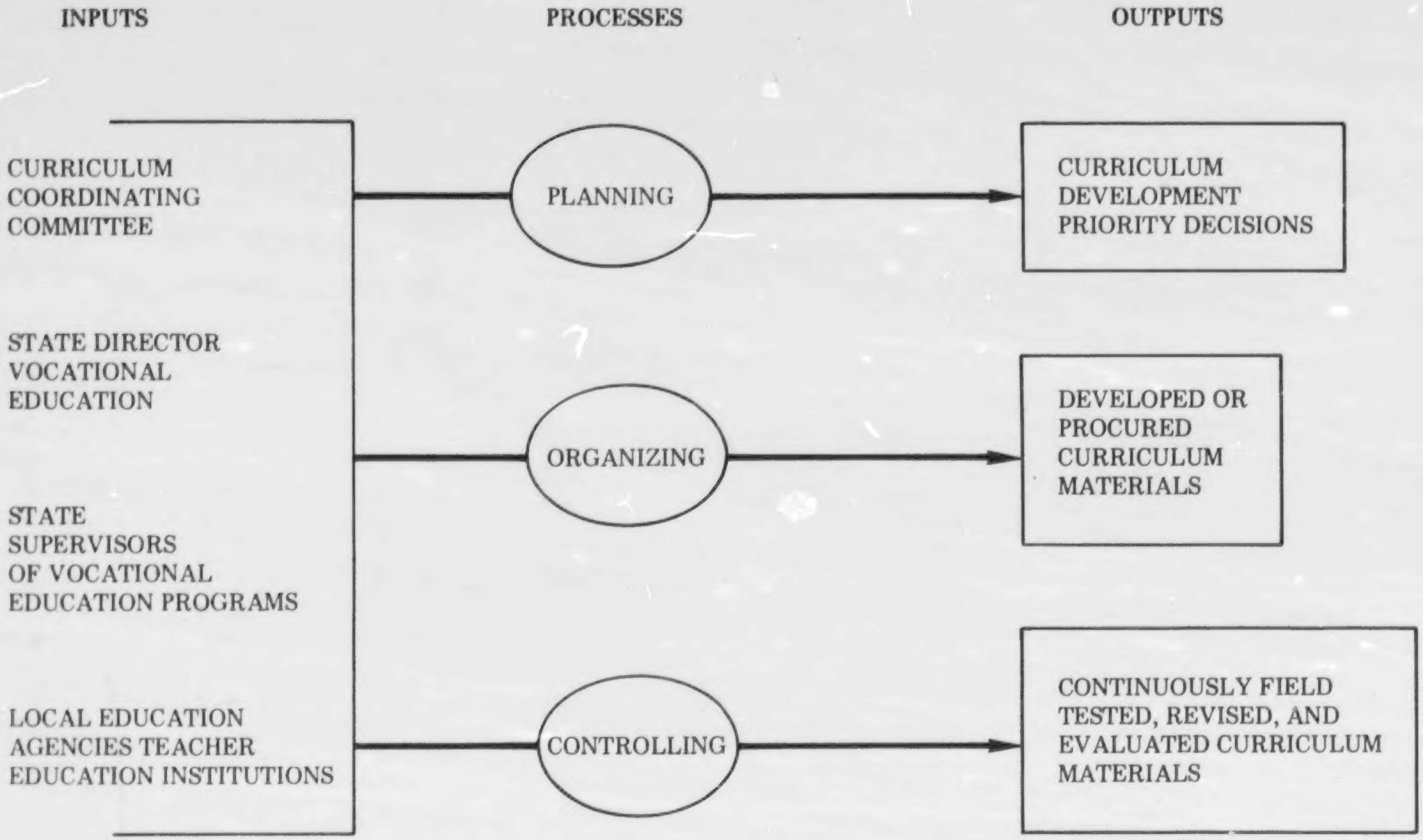
INPUTS
PROCESSES
OUTPUTS
CURRICULUM COORDINATING COMMITTEE
STATE DIRECTOR VOCATIONAL EDUCATION
STATE SUPERVISORS OF VOCATIONAL EDUCATION PROGRAMS
LOCAL EDUCATION AGENCIES TEACHER EDUCATION INSTITUTIONS
PLANNING
ORGANIZING
CONTROLLING
CURRICULUM DEVELOPMENT PRIORITY DECISIONS
DEVELOPED OR PROCURED CURRICULUM MATERIALS
CONTINUOUSLY FIELD TESTED, REVISED, AND EVALUATED CURRICULUM MATERIALS

Figure 2. A MANAGERIAL SYSTEM FOR CURRICULUM MATERIAL DEVELOPMENT, INSTALLATION AND EVALUATION

when compared with planned objectives, is provided for subsequent review and adjustment. In the following sections of this presentation, each process will be discussed more thoroughly in terms of the specific tasks used in its application.

The Planning Process

The primary function of the curriculum coordinator in the planning process is forming and directing the activities of a curriculum coordinating council. The council would be established to make decisions concerning curriculum material needs of the state's vocational and career education programs. Members of the council could consist of representatives from local educational agencies, state supervisory staff, teacher education personnel, business and labor leaders, and curriculum material developers. The council serves in a decision-making role to ascertain the curriculum material development priorities for vocational and career education programs within the state. Other functions that would be performed are:

1. Formulating policies for curriculum material development decisions;
2. Providing a communication link among various organizations comprising the committee;
3. Receiving input and concerns from various individuals, organizations, and interest groups;
4. Providing assistance in reviewing and reacting to curriculum materials under development;
5. Developing a master plan to give direction to curriculum materials development and renewal activities. (Feyereisen, Florino, and Nowak, 1970).

A flowchart of the tasks involved in the planning process of a curriculum coordinator is shown in Figure 3. The formation of the curriculum coordinating committee is the initial step in the entire process. The first task of the committee is to develop policies and guidelines for making decisions about curriculum materials that are needed within the state. These policies would involve determining: (1) the duties of the committee, (2) procedures for conducting the meetings, and (3) criteria for making decisions. As the curriculum committee is being formed, the coordinator should be identifying the status of curriculum materials for current vocational and career education programs. This information can be obtained with the assistance of the state supervisory staff, teacher educators, and local directors of vocational education. After determining the current status of curriculum materials, a projected list of needed materials is prepared which could ideally implement present and future programs. This information can be collected from sources such as the state plan and members of the supervisory staff. As curriculum material needs are being identified, funding sources and available financial support must be determined in order to develop or procure the needed materials. These sources would range from allocated federal funds to private foundation grants.

After the information concerning curricula needs and funding is obtained, the list of needs is submitted to the curriculum coordinating committee for their review. The curriculum coordinating

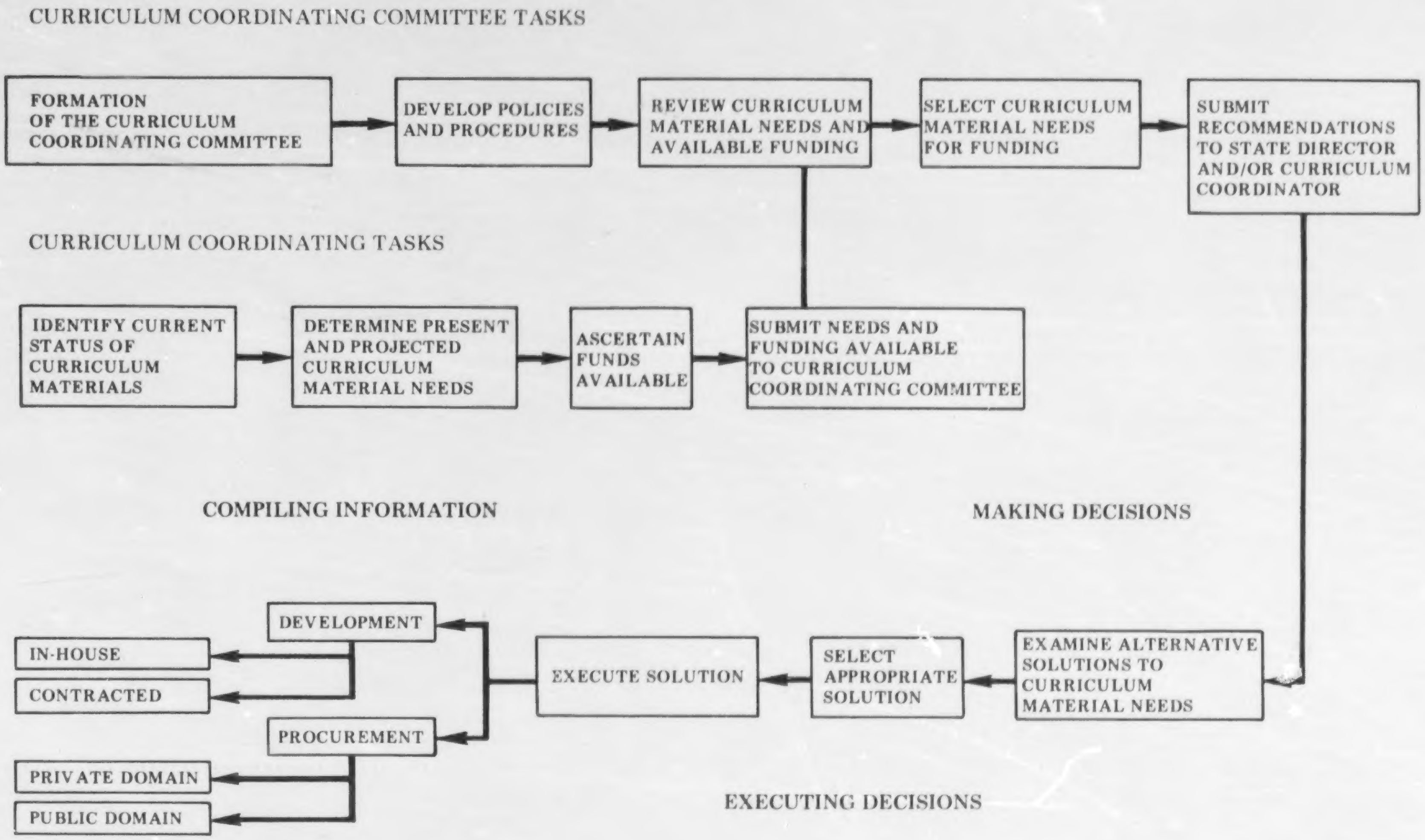
CURRICULUM COORDINATING COMMITTEE TASKS
FORMATION OF THE CURRICULUM COORDINATING COMMITTEE
DEVELOP POLICIES AND PROCEDURES
REVIEW CURRICULUM MATERIAL NEEDS AND AVAILABLE FUNDING
SELECT CURRICULUM MATERIAL NEEDS FOR FUNDING
SUBMIT RECOMMENDATIONS TO STATE DIRECTOR AND/OR CURRICULUM COORDINATOR
CURRICULUM COORDINATING TASKS
IDENTIFY CURRENT STATUS OF CURRICULUM MATERIALS
DETERMINE PRESENT AND PROJECTED CURRICULUM MATERIAL NEEDS
ASCERTAIN FUNDS AVAILABLE
SUBMIT NEEDS AND FUNDING AVAILABLE TO CURRICULUM COORDINATING COMMITTEE
COMPILING INFORMATION
MAKING DECISIONS
EXAMINE ALTERNATIVE SOLUTIONS TO CURRICULUM MATERIAL NEEDS
SELECT APPROPRIATE SOLUTION
EXECUTE SOLUTION
DEVELOPMENT
IN-HOUSE
CONTRACTED
PROCUREMENT
PRIVATE DOMAIN
PUBLIC DOMAIN
EXECUTING DECISIONS

Figure 3. PLANNING

committee reviews the list and develops priorities in terms of overall program needs and recommends levels of funding for each priority. The specification of curriculum material priorities is then submitted to the state director and used by the curriculum coordinator in examining alternate solutions to fulfill the needs. The curriculum coordinator examines these needs in terms of criteria such as: (1) the availability of commercially prepared materials, (2) development of similar materials by another state or federally funded project, and (3) capability of development within the state department of vocational education. After alternatives have been considered and a solution selected, the curriculum coordinator would execute the decision through: (1) a procurement procedure, or (2) developing the curriculum material within-house, or (3) subcontracting to other agencies.

The Organizational Process

After the planning phase has been completed, the decisions made will need to be implemented and directed by the curriculum coordinator. In many instances, the coordinator will need to become a "change agent" (Havelock, 1973) in facilitating the adoption of innovative curriculum materials by local school districts. The development and installation of individualized instructional packages is a current example. An assumption is made in this discussion that most curriculum improvements will be made using materials that are innovative and represent something new to teachers. Therefore, the organizational process will require tasks that deal with educational change. A model proposed by Guba and Clark (1965) appears to be an appropriate one for this purpose. The Guba and Clark model suggests that four major processes or strategies are necessary for change in education. These strategies are research, development, diffusion, and adoption. The flow chart, shown in Figure 4, advocates three of the four strategies and presents specific tasks used by a curriculum coordinator in linking various organizations concerned with developing, diffusing, and adopting innovative curriculum materials.

As the curriculum material is being developed or obtained, liaison between the curriculum producers and the state department staff, and teacher educators, must be maintained by the coordinator. This liaison could involve periodical review of curriculum materials under development by state supervisory staff, teachers, and teacher educators. It is important at this point that an opportunity be given for all individuals and groups who will be preparing and supervising teachers using the completed curriculum material to review and make suggestions concerning its final form and/or proposed use. Other forms of liaison would include administrative and support services such as monitoring fiscal control of the project and providing information about similar efforts to the developers.

During the development or procurement of the curriculum materials, decisions must be made about the selection of a school for field testing purposes. After the school has been selected, the teachers and administrators must be prepared to use the material in the intended manner. Various problems must be anticipated and procedures for controlling them should be discussed in the preparation meetings. These problems may range from scheduling students who will use the material to methods teachers use in reporting their reactions and recommendations to the curriculum developers. A critical task of the coordinator, in cooperation with the curriculum developer and local educational agency, is the procurement of the hardware (projectors, tape recorders, etc.) and software (filmstrips, printed material, etc.) needed to implement the developed curriculum material. Arrangements must be made to reproduce and deliver sufficient quantities of the needed curriculum material in time for the teachers to review and organize it properly. The local educational agency

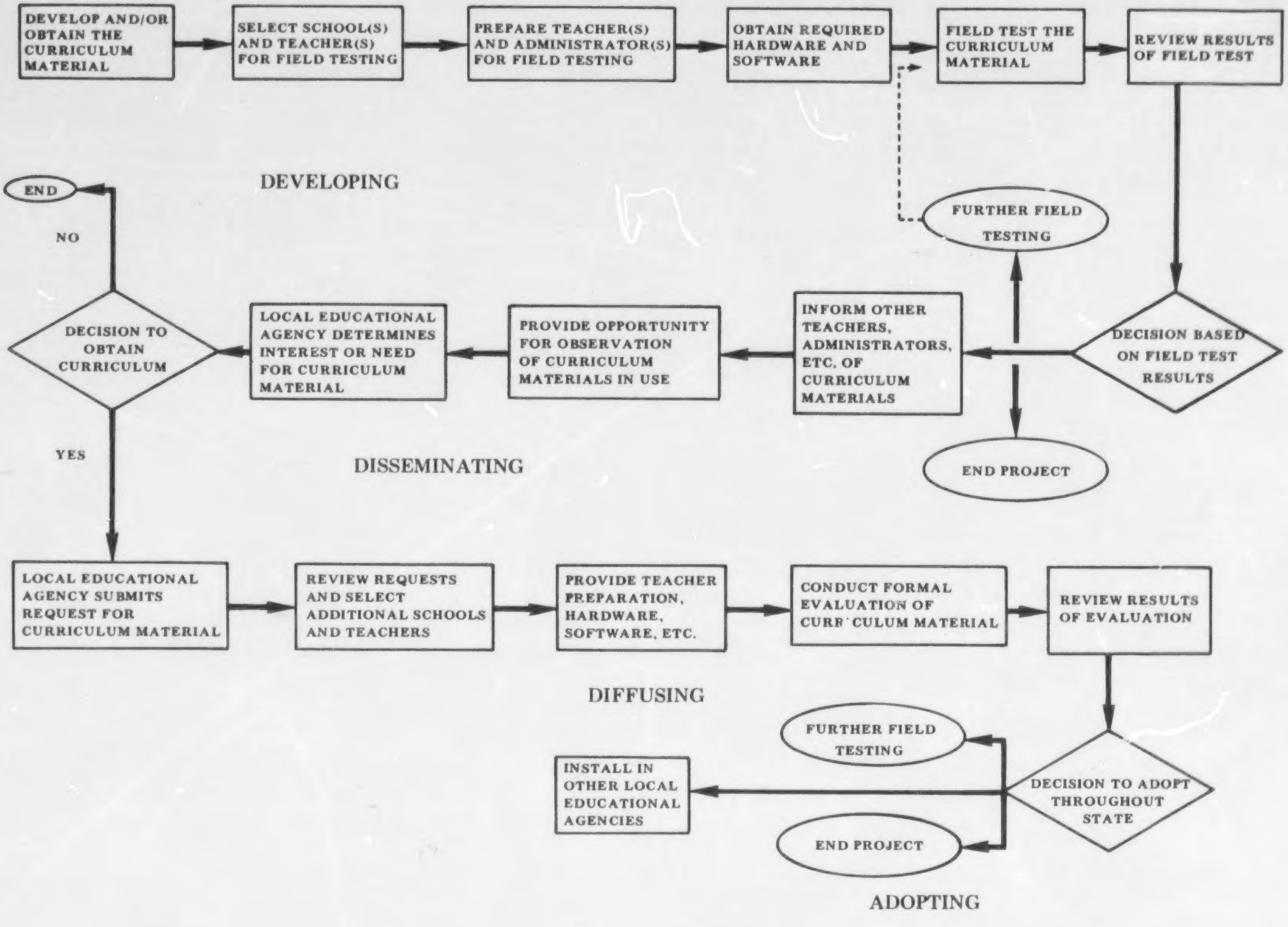
DEVELOP AND/OR OBTAIN THE CURRICULUM MATERIAL
SELECT SCHOOL(S) AND TEACHER(S) FOR FIELD TESTING
PREPARE TEACHER(S) AND ADMINISTRATOR(S) FOR FIELD TESTING
OBTAIN REQUIRED HARDWARE AND SOFTWARE
FIELD TEST THE CURRICULUM MATERIAL
REVIEW RESULTS OF FIELD TEST
DEVELOPING
FURTHER FIELD TESTING
DECISION BASED ON FIELD TEST RESULTS
END PROJECT
INFORM OTHER TEACHERS, ADMINISTRATORS, ETC. OF CURRICULUM MATERIALS
PROVIDE OPPORTUNITY FOR OBSERVATION OF CURRICULUM MATERIALS IN USE
LOCAL EDUCATIONAL AGENCY DETERMINES INTEREST OR NEED FOR CURRICULUM MATERIAL
DECISION TO OBTAIN CURRICULUM
NO
END
YES
DISSEMINATING
LOCAL EDUCATIONAL AGENCY SUBMITS REQUEST FOR CURRICULUM MATERIAL
REVIEW REQUESTS AND SELECT ADDITIONAL SCHOOLS AND TEACHERS
PROVIDE TEACHER PREPARATION, HARDWARE, SOFTWARE, ETC.
CONDUCT FORMAL EVALUATION OF CURRICULUM MATERIAL
REVIEW RESULTS OF EVALUATION
DIFFUSING
DECISION TO ADOPT THROUGHOUT STATE
FURTHER FIELD TESTING
INSTALL IN OTHER LOCAL EDUCATIONAL AGENCIES
END PROJECT
ADOPTING

Figure 4. ORGANIZING

must have specifications for hardware and software from the curriculum developers in order to purchase it from available sources in time to begin the field testing. The curriculum coordinator will play an important role in linking the curriculum developer with the teachers and administators with respect to procurement of the required instructional resources.

The curriculum material would be revised and modified during this time by the developers using the inputs of students, teachers, and administrators at the field test site. Upon completion of the field testing phase, the results should be reviewed by the curriculum coordinating committee, or other designated group, and decisions made concerning future directions. It is possible that additional field testing is needed before disseminating the results. It may not be feasible to continue the project due to poor results or a low yield of return for the investment made in the project.

Hopefully, the results will be favorable and additional actions taken to continue the dissemination effort. It is important to realize that the development and field testing phase may require at least two years depending upon the amount and complexity of the curriculum material.

If the results are favorable, dissemination of the information should be made to teachers, administrators, teacher educators, and state staff. Several approaches may be utilized in this endeavor including presentations at meetings of professional organizations, scheduled state department staff meetings, and in-service teacher preparation programs. In addition to the dissemination process, opportunities should be given for interested groups and individuals to observe the curriculum materials in operation at the field test site. As teachers and administrators become aware of the curriculum material and determine their interest in using it within their schools, the curriculum coordinator will need to develop criteria and procedures for selecting additional teachers and schools. It should be emphasized at this point, that the formal evaluation of the curriculum materials will begin during the next phase and a limited number of schools should be selected to represent an appropriate range of conditions.

Procedures similar to those used in field testing will need to be followed in installing the curriculum materials with additional schools. Teachers must be prepared, instructional materials obtained, and evaluation procedures should be finalized. During this phase, a rigorous evaluation of the curriculum materials should be accomplished by comparing the performance of the material against prestated standards. The evaluation phase will be discussed in greater detail in the next section. As the curriculum materials are installed and used by teachers and students, evaluative data is collected and analyzed. The results will provide the information needed to make decisions regarding further field testing or installing in other school systems throughout the state.

The Controlling Process

The purpose of control in the managerial system is to regulate and maintain the system in achieving its goals and objectives. It is that phase of the system which monitors performance and provides feedback information which can be used in adjusting the means and ends (Kast and Rosenzweig, 1970). Ultimately, the controlling process must insure that the output (curriculum materials) will satisfy the environmental conditions (needs of society) of the system. There are several major tasks involved in the controlling process as shown in Figure 5.

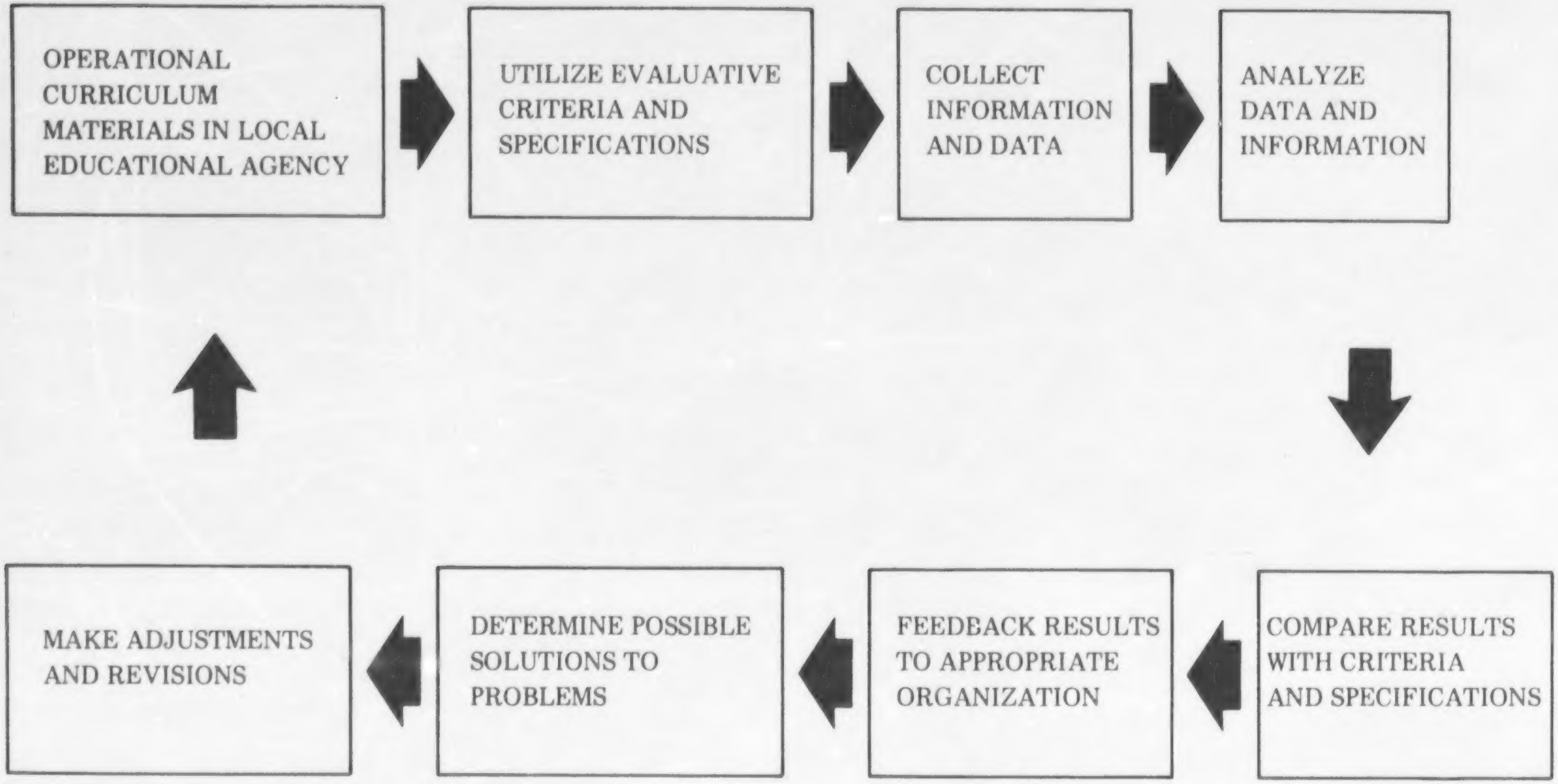
OPERATIONAL CURRICULUM MATERIALS IN LOCAL EDUCATIONAL AGENCY
UTILIZE EVALUATIVE CRITERIA AND SPECIFICATIONS
COLLECT INFORMATION AND DATA
ANALYZE DATA AND INFORMATION
COMPARE RESULTS WITH CRITERIA AND SPECIFICATIONS
FEEDBACK RESULTS TO APPROPRIATE ORGANIZATION
DETERMINE POSSIBLE SOLUTIONS TO PROBLEMS
MAKE ADJUSTMENTS AND REVISIONS

Figure 5. CONTROLLING

Initially, the curriculum coordinator, in cooperation with others, must develop evaluative criteria and performance specifications that will be used in determining if the prestated goals and objectives have been achieved. For example, one of the criteria used by the curriculum coordinating committee in determining priorities may be the appropriateness of the material for present and future occupational needs. The evaluative criteria in this case would be the content validity of the material with respect to present and future occupational requirements. In order to collect information about content validity, the curriculum coordinator could submit the material to an ad hoc occupational advisory committee for their review and recommendations. After reviewing their recommendations, the curriculum coordinator would initiate feedback to the appropriate organization or group. In the case being presented, this could be the curriculum coordinating committee or the curriculum developers. At this point, adjustments and modifications are made to the curriculum material and it is again installed in the local educational agency. Additional evaluative criteria and methods of collecting information which is provided to the appropriate group for their adjustment are shown in Figure 6.

Although there are many factors involved in the controlling process, the list is suggestive of several criteria that may be used. Many of these activities would be conducted within the state department by the curriculum coordinator while others would be formally contracted projects to obtain the needed information for making decisions. The primary concern is to provide feedback to the appropriate group and coordinate efforts in making adjustments to the development, installation, and evaluation of curriculum material on an ongoing, continuous basis.

In conclusion, the role of the state department of vocational education in improving curriculum for local educational agencies is a complex and time consuming enterprise. The organizational environment requires the coordination and integration of many administrative levels within numerous organizations and institutions. The managerial processes will require individuals who are capable of working well with many persons in various organizations and areas of vocational education. The proposed management model that was described to control and direct the various human, financial, and material resources will of necessity be changed, modified, and adapted to existing state department policies and personnel. However, it is legitimate to initially explore optimums as the realities of any given situation will compromise most of us soon enough.

CRITERIA	METHOD OF OBTAINING INFORMATION	FEEDBACK	ADJUSTMENT
Do curriculum materials have content validity in terms of occupational requirements?	Periodic examination of curriculum material by ad hoc occupational advisory committees.	Curriculum Coordinating committee and/or curriculum developers.	Fund project to extensively revise curriculum material or make minor revisions and reprint.
Are curriculum materials being used effectively and efficiently by teachers?	Visit programs using curriculum materials to observe teachers and make anecdotal records of observations.	Teacher education institutions and/or state supervisory staff.	Modify methods being taught to preservice teachers. Assist supervisory staff in modifying in-service teacher behavior.
Do curriculum development methods produce quality materials with least cost and time?	Conduct cost/effectiveness studies to determine cost of curriculum materials developed by different approaches.	State director and curriculum coordinator.	Select methods of organization that produce quality materials with least cost and time.
Are curriculum materials producing desired student behaviors?	Conduct controlled studies to determine if and how students are achieving objectives.	Curriculum developers.	Redevelop curriculum material until it meets acceptable standard of performance.

Figure 6. SUGGESTED CONTROLLING TASKS

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Section Five :

Mechanisms and Approaches to Curriculum Development

Goals and Mechanisms[1] for Curriculum Development

by Elizabeth J. Simpson*

Analyze the job. Determine what tasks must be performed by the worker. State performance objectives in terms of these tasks. Determine what the learner needs to know in relation to the objectives. Decide on related learning experiences and teaching strategies, teaching aids, and means of evaluation.

That's how you develop curriculum plans for vocational-technical education. Right? Wrong.

Regretfully, that is the usual mode of curriculum development in vocational education. It isn't entirely wrong - just incomplete. Very incomplete.

The job itself is one basis for curriculum decisions in vocational education - an important basis, but not the only one. Student needs and interests must also be considered; these are sometimes given consideration in developing vocational curricula.

Almost never considered are social conditions and needs as they relate to the area of study. Rarely are the moral and ethical issues related to a field of study given consideration in making curriculum decisions. Rarely do we examine the philosophical bases for our decisions.

In developing curricula in vocational-technical education, we should spend about the same amount of time determining the bases for curriculum decisions (that is, decisions about objectives, content, teaching strategies, and learning experiences, teaching aids, and evaluation) as we spend applying these decisions in developing the curricula.

Certain issues should be consciously considered by curriculum developers. For example, what is the source of authority in curriculum building? That is, where does the curriculum builder get the moral authority for the decisions he makes about what and how to teach?

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[1] Appreciation is hereby expressed to Smith, Stanley, and Shores for some of the ideas expressed in their book, Fundamentals of Curriculum Development, which are here applied to the development of vocational curricula. (See B. Othanel Smith, William O. Stanley, and J. Harlan Shores, Fundamentals of Curriculum Development, World Book Co., Yonkers on Hudson, New York, 1950.)

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If he teaches in a parochial school, he might conclude that Divine Will is his chief source of authority. I wouldn't have believed that this idea would impact much on practical classroom choices in areas other than those directly related to religion - that is, I wouldn't have believed this until I followed a very devout Catholic woman in teaching a college class and tried to use her curriculum plan. This was for a course in principles of secondary education. The whole course was permeated by a particular religious feeling. The experience was illuminating. I was stunned to find how much one's personal religious beliefs could be reflected in the curriculum in an area not directly related to religious matters.

Some would say that science is the source of our educational authority and that the scientific method is the only reliable means of establishing truth. Truth, of course, is a source of authority in teaching. The chief difficulty with this view is in the realm of values and aesthetics, since this view insists that education can concern itself with ethical and aesthetic judgments only if these judgments can stand the test of scientific verification.

Another view holds that the school is the agent and derives its authority from the society that maintains it. There are at least three versions of this view: (1) the school is maintained by the state and the teacher is the agent of the state; (2) the teacher's authority rests upon the consensus of opinion in the local community in which he teaches (sound familiar?); and (3) authority resides in the fundamental moral and intellectual commitments constituting the core of the culture. In conformance with this view, American society, the source of authority would then reside in the democratic ideal, involving: intelligent and responsible participation of all the people; equality of opportunity; and the opportunity to grow and develop to the extent possible.

Teaching, if it has any effect at all, always shapes the character and personality of the learner in one way rather than another. What one believes about the source of authority in education does influence curriculum decisions; it makes a difference with respect to what is taught, how it is taught, and how students are thus affected.

If you doubt this, take any occupational field with which you are familiar and ask yourself what difference it would make in program content and methodology if the accepted source of authority were (1) the state, with education perceived as a tool of the state, (2) consensus of local opinion, and (3) the democratic ideal. You'll get some different answers.

Another curriculum issue which has been given considerable visibility in vocational education is concerned with the needs and interests of students versus the needs of society. That is, in vocational education is the primary objective to develop the individual in terms of his work interests and need for personal development or to meet society's need for trained peoplepower? In recent years, we have tended to value the individual's needs and interests most highly. My own view might be termed interactive. The interactive position gives consideration to the needs of both individual and society in determining educational objectives.

In developing curricula, does it really matter whether one gives emphasis to the needs of individuals or to society or to some combination of both considerations? The answer is an emphatic "yes." And, it is obvious that one's position with respect to this issue relates to one's position regarding the source of authority in education.

A third major curriculum issue concerns the social functions of education. Should education adapt to and follow after what is happening in society or should it lead and influence what happens? For example, at a very practical level, does one develop a vocational curriculum based on existing practice if that practice is a questionable one - or does one, through the curriculum, raise the questions and try to change practice? Does one develop curricula to prepare students for a particular job just because the job exists? Many would hold that this is our only responsibility. Or, does one question whether some jobs should exist, or possibly be changed in nature, and develop curricula accordingly?

The position that the social office of education is to foster examination and reconstruction of social ideals, beliefs, and institutions is consistent with the view that moral-ethical issues as they relate to occupational fields should be considered as bases for curriculum decisions. During fiscal '74, every Request for Proposals issued for curriculum development under Part I required an examination of the moral-ethical issues of the relevant occupational field as one basis for decisions about objectives, content, learning experiences, teaching aids, and evaluation. Marine science will give attention to such questions as pollution of the waters and the meaning for the marine science program of study. Agri-business will consider issues related to pest control and the use to which certain crops are put and the relevance of these questions to the agri-business curriculum. The field of construction will consider the social consequences of quality of workmanship, not just tasks to be accomplished in job performance. Home economics will look at such issues as individual rights vs. the rights of society in areas such as sterilization, abortion, etc. and the implications for the curriculum. With respect to this last example, I would suggest that an obvious implication is that the issues ought not be ignored, but honestly examined, and that this is appropriate curriculum content.

The whole point of this discussion is that there are a number of bases for curriculum decisions in vocational education which we tend to ignore. We act on certain premises but these are rarely examined. Consciously, we have tended to use the job itself as almost our sole source of support for curriculum decisions. But, we ought also to consider the source of moral authority for what and how we will teach; the social objectives of education; the social functions of education; and the moral and ethical questions of the field with which we are concerned.

Performance objectives are fine - if they don't become a religion. The use of the taxonomies of educational objectives as helpful tools are certainly recommended. Individualized instructional materials - great; and certainly such materials relate to a certain philosophical position. But, I am of the opinion that a careful and thoughtful examination of the basic beliefs underlying curriculum choices would do more to enhance the power of the curriculum as an effective educational tool.

And here is where state directors can lead. You are in an ideal position to raise questions that ought to be asked but perhaps, even probably, won't be asked unless you take the initiative. You can raise such questions as:

> What ought the content of an educational program to be? And where does the authority for such decision reside?
>
> Should needs of the individual or needs of society or some combination of these be given greatest emphasis in determining educational objectives?

Should the curriculum adapt to what is or lead in influencing for change? If the latter, what change?

What are the moral and ethical issues in an occupational field and what difference ought these make in curriculum decisions?

These concerns are not peripheral to the curriculum development effort - but central to the process.

You are in the best positions to provide the responsible leadership so desperately needed in raising and dealing with such critical issues.

NOTE: Points of view or opinion of the author are her own and do not necessarily represent official Office of Education position or policy.

An Industrial Approach to the Development of Instructional Systems

by John P. Cicero*

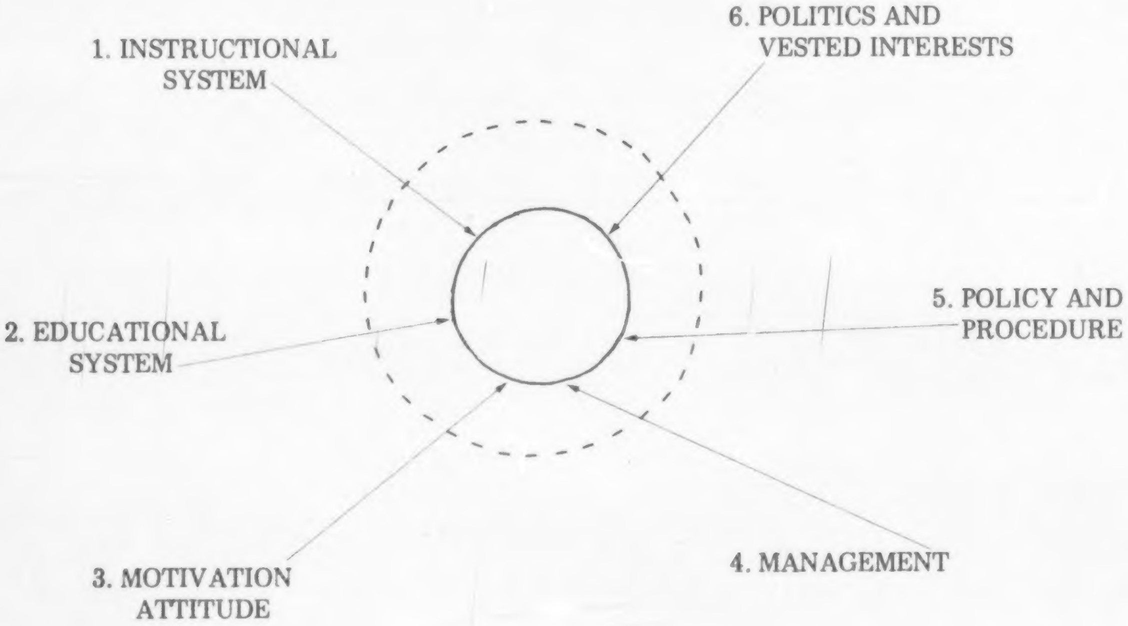
Systems Performance

To effectively utilize a systems concept, the designer must assume the management science stance. In other words, he must overview those elements that may have an impact on outcomes and/or performances. The key is to tie the system to some performance.

A performance approach considers a multitude of factors that interrelate to affect the outcomes of specific people in specific positions. If then, you're talking about an instructional performance system, you want to focus the system on the position and consider what combination of elements are going to affect performance within that position.

For example, consider the following diagram.

-SYSTEMS PERFORMANCE-


1. INSTRUCTIONAL SYSTEM
2. EDUCATIONAL SYSTEM
3. MOTIVATION ATTITUDE
4. MANAGEMENT
5. POLICY AND PROCEDURE
6. POLITICS AND VESTED INTERESTS

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While the six factors outlined here are not intended to be all inclusive, given their somewhat generic applicability, a brief discussion of each is appropriate.

Instructional System - The total instructional system involves the design, carry-out, and evaluation functions on a per program basis. Pivotal considerations are a learner-based orientation and job relevant content evaluation.

Perhaps, the most common error is a teacher orientation. If the question: "What should we teach?" becomes the basic design philosophy, a performance system will never be the ultimate outcome. The approach must ask what do we want the trainee to learn, to be able to do - what trainee behaviors are we looking for. The focus begins and ends with the trainee. This concept will be dealt with in more detail in a later section.

Job relevant content is another area where mistakes often occur. What can happen is that program development, even if learner oriented, may take place in a vacuum. It is possible to develop educationally sound training programs that are not relevant to anything specific. Work the process from the position and the desired performance backwards. If training is developed with a view toward the learner in his position performing some task, much ineffectiveness can be minimized.

Educational Systems - Seldom does training consist of a single program. More often there are a multitude of programs, cross-training considerations, refresher training, continuing education, and any number of other learning forums confronting the trainee at different points in his development. This larger learning environment must be evaluated in terms of sequence and continuity. This total system impacts performance in a more comprehensive way than any single program. Questions might be:

- Have conflicts or contradictions in information moving from one program to another been avoided?
- Has duplication in the total training process been avoided?
- Have "gaps" in the total training process been avoided?
- Have unnecessary or unexplained methodological shifts from one program to another been avoided?
- Is there reinforcement of previous learning from one program to another?
- Is there some centralized "control" of the total training package?
- Is there consistent feedback to the trainee throughout the training process?
- Is timing so that new skills can be practiced and reinforced both in training and on-the-job?

A "no" response in any of these areas may have significant negative impact on performance. While the instructional systems individually affect performance, collectively they are interdependent affecting each other and together affecting performance. This interdependence works throughout the factors of the performance model.

Motivation - While the total realm of motivational concepts is relevant, consider for the moment, potential negative fallout. Negative motivators can, in effect, cancel any gain derived through effective instructional and educational systems. Enough research evidence exists to support the contention that attitudes and/or feelings toward the learning environment are as important as any content considerations. Again, this area will be addressed in more detail in a later section.

Management - The ability to effectively monitor a performance system represents a critical input. Any instructional (educational) system is only as effective as the management support and understanding behind it. For example, a system without appropriate logistics, financing, and evaluation from a cost-effective and trade-off perspective cannot achieve a meaningful performance output. Even more basic is communication of simple procedural techniques. For example, how can a manager evaluate an instructional system if he is unaware of how it operates? A classic misinterpretation is the manager looking at traditional classroom evaluation techniques while judging a self-paced criterion-referenced program.

Policy and Procedure - The formal structure and operation of the organization need to be consistent with training objectives and motivational considerations. Policy that precludes desired performance outcomes will have an obvious negative impact. Too often policy may have the effect of rewarding non-performance and punishing performance. For example, a task may take one hour to effectively complete. Yet a policy may exist constraining completion time to forty-five minutes. The effective performer will be "punished" and the ineffective performer "rewarded" over the long run.

Politics and Vested Interests - Often the embarking on a systems approach generates a change-paced environment. The rapidity and frequency of the change sometimes makes clear distinction between the old and the new at best difficult, but more often impossible due to the absence of any true comparative base. This may lend an air of ambiguity to the total systems process. Where flexibility and maneuverability are key to successful completion, instead resistance may predominate. The resistance is generally subtle even to the extent of being unconscious. The reason is that from a logic base there is little with which to openly attack a systems approach. Furthermore, open attack can be confronted directly and dealt with directly.

The more subdued resistance falls prey to politics and vested interests. The status quo is the hue and cry. Change for the sake of change is the formally defined enemy. The factors that operate include: habit; the natural inclination to do things the way one has always done them; the risk involved in changing a previously successful strategy; the reaction to ego models as examples for our own action; basic insecurity in changing any mode of operation; and group norms and pressures. The issue for practical purposes is not the kind or frequency of resistant traits, but who and/or what groups have them. The system cannot be implemented without management support or implementor support. A non-resistant management cannot command away this type of resistance; non-resistant implementors cannot survive a resistant management. The impact, then, of politics and vested interests in a resistant mode infiltrates the whole systems performance model.

The Generic Instructional System

A Model - An instructional system contains three basic elements:

- a definition or statement of the behaviors that the trainee must be capable of demonstrating at the completion of training;
- a definition or statement of the relationship between the behaviors achieved in training and actual on-the-job performance;
- a recognition and simulation of the on-the-job conditions under which the trainee must demonstrate the behaviors.

The above elements can be broken down into several steps which take the program design from initial establishment of a course goal through the development of an ongoing feedback/revision cycle. Figure 2 represents a generic model showing the flow of this development process.

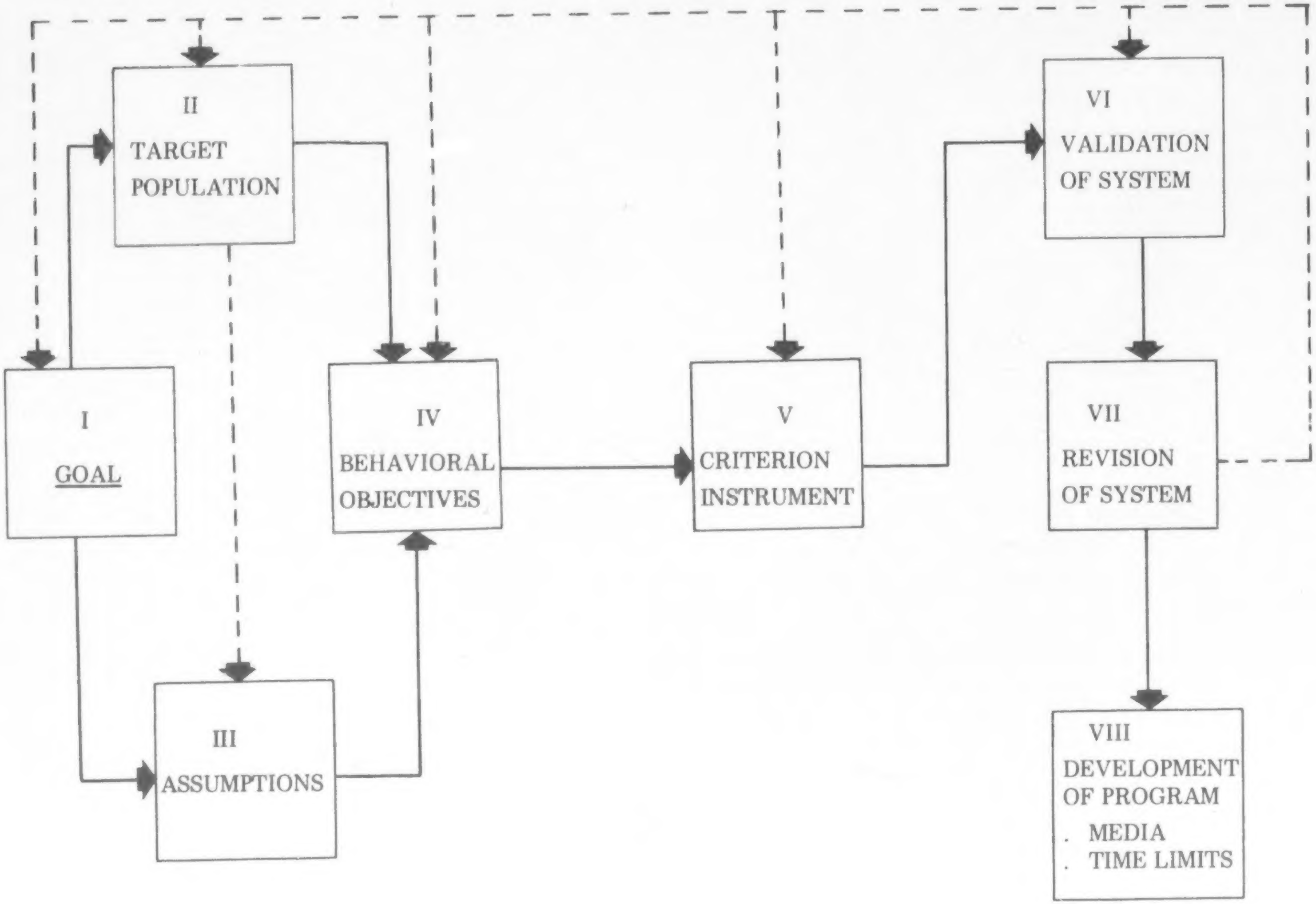
Goal Analysis - To effectively formulate the overall direction of the system, it must first be broken down into logically identifiable subsystems. For example, a program for auto mechanics might look at any number of subsystems such as fuel, electrical, and steering. It is important to identify the relationships among these subsystems and the logical sequence in which they might be taught. However, the most critical input at this stage is to develop a task listing which describes, for each subsystem, the behaviors the mechanic is expected to perform. This listing will help clarify the relationships and interdependencies among system components and the sequence of presenting information. At this stage information may be collected from product experts, engineering, training, or any other group associated with the desired outcomes. Once this procedure has been followed, a course goal can be formally written.

The reasoning behind this process is to immediately focus the system on learner behavior and/or performance outcomes. Without yet going into a lot of detail, the system takes on a direction and specificity not possible by simply estimating or speculating what its outcomes should or should not be.

Target Population and Assumptions - To purposely move a trainee from one level of skill or knowledge to another, of necessity demands the knowledge of where the trainees' level is prior to entering the system. What skills and knowledges does he already possess and where is his level in comparison to the expected performances the training program is designed to achieve? This must be measured at the point of entrance into the program. However, be certain that you look at the skills and knowledges specific to the instructional system you are dealing with. Too often a measure of potential ability rather than specific program relevant skills is taken. For example, determining entry level in the auto mechanics program cannot be accomplished by testing generic mechanical skills - you must test those skills specific to what you're going to teach. For example, the potential ability to use a screwdriver is not the same as the acquired skill of being able to use a screwdriver to adjust the air intake on a carburation system.

In many cases, the entering behaviors of the target population are assumed rather than measured. While measurement is the acceptable approach, there are, at least, three basic reasons why it becomes feasible for the program developer to make assumptions.

FIGURE NO. 2


I
GOAL
II
TARGET POPULATION
III
ASSUMPTIONS
IV
BEHAVIORAL OBJECTIVES
V
CRITERION INSTRUMENT
VI
VALIDATION OF SYSTEM
VII
REVISION OF SYSTEM
VIII
DEVELOPMENT OF PROGRAM
. MEDIA
. TIME LIMITS

AN INSTRUCTIONAL SYSTEM

- To take precise measurements would either cost too much or take too much time with respect to the payoff.

- Certain types of measurements, such as attitude or mood, are difficult to get or are valid only for a specific point in time.

- The behavior is obvious and no benefit would be gained by precise measurement.

Whether to measure a behavior exactly or to make an assumption is always a trade-off situation balancing measurement results against cost, time, and possible impacts on learner and/or program performance and effectiveness. An incorrect measurement obviously adversely affects the program. Keep in mind, however, that an incorrect assumption will also negatively impact the system - just because it was an assumption and, perhaps, subjective, does not lessen its importance.

Behavioral Objectives - The behavioral objective fine tunes the learner behaviors necessary for the trainee to successfully complete the program. In effect, the objective is the core of the system. Each objective must contain three criteria:

- what you want the trainee to do;

- under what conditions; and

- a measurement.

In developing objectives the two most frequent errors are: (1) focusing on what the instructor should do; and (2) making objectives too complex by combining several behaviors into a single objective.

While there is general consensus on the above comments, the process of developing a system with objectives poses a central issue - where to start and what can be traded-off when time, cost, and manpower prevent the "perfect" theory from reaching its ultimate. Look at Figure 3.

The system of objectives themselves may be compared to an organization chart. The goal is the president. It gives overall direction. Working for it directly are terminal objectives, and for them enabling objectives, and for them task objectives. The issue is, should initial system design move from the goal down, or the task objective up. It is the opinion of this writer that in order to achieve and maintain system continuity, the system should be built from the terminal behavior down to the task behavior. This is especially critical in an industrial environment where time/cost/manpower constraints may curtail total design efficiency. For example, if a task objective is used as the starting point it is not meaningful until all related task and enabling behaviors have been identified to collectively determine where the system is going. On the other hand, a series of terminal objectives clearly identify the end points in the system and give a continuous flow. The trade-off is leaving the detail up to the expertise of the instructor; but, at least he knows exactly where he is going and exactly the trainee behaviors expected.

Criterion Instruments - For all practical purposes, once a behavioral objective is developed, an internally consistent testing program is immediately available. The objective states a behavior, the conditions, and the measurement. The test item need only ask for the performance, under the

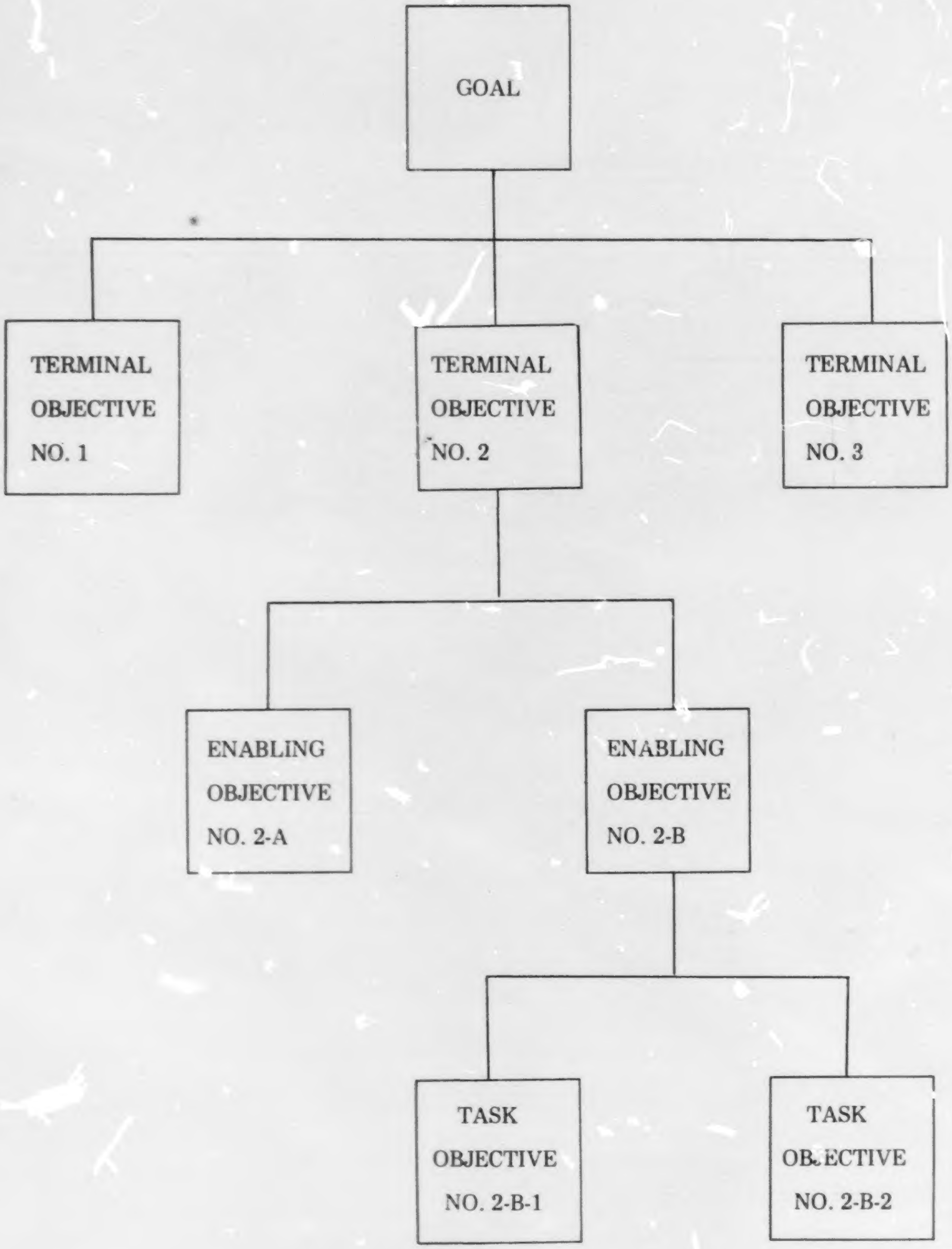

GOAL
TERMINAL OBJECTIVE NO. 1
TERMINAL OBJECTIVE NO. 2
TERMINAL OBJECTIVE NO. 3
ENABLING OBJECTIVE NO. 2-A
ENABLING OBJECTIVE NO. 2-B
TASK OBJECTIVE NO. 2-B-1
TASK OBJECTIVE NO. 2-B-2

FIGURE NO. 3

conditions stated, and to the level of proficiency demanded. For example, how would you test for the following objective?

> The trainee will be able to write a behaviorally stated objective without the use of any resource materials. The objective must include a behavioral term, conditions, and a measurement.

Exactly; ask the trainee to write a behaviorally stated objective and evaluate it in terms of whether or not the three criteria were present. The method of evaluation is not norm referenced, but criterion referenced. In other words, each trainee is rated against a performance, not against his peers. In this mode the traditional grading structure breaks down. It does not become a question of percentages or "A"-"F", but instead, the trainee meets the objective (the performance) or he does not.

Validation and Revision - It was suggested earlier that it was possible to develop a system relevant only to itself - educationally sound, but not related to on-the-job performance. In this context, the validation of the system must take place with a view toward actual on-the-job performances.

Look at the trainee's job and explore the following kinds of questions with respect to the training program.

- Is the emphasis in training the same as actual field performance or are you training heavily on the exceptions and, perhaps, not at all on day-to-day routine operations?
- Are you over training skills that can only be affected by continuous practice and under training skills that can be mastered with limited in training practice?
- Are you setting objectives in training that are unrealistic in terms of actual job conditions - how close do the conditions in an objective simulate the work environment?
- Are you training for performances today that do not occur on the job for many months?
- Is there a skill level difference or a shorter learning curve between formally trained personnel and untrained personnel?
- Is your training program addressing only trainable activities or are you focusing on problems not resolvable through training such as inconsistent policy or inefficient management?

In answering these kinds of questions the system can be validated or, if necessary, revised to meet the performance criteria it is designed to achieve.

Managing the Affective Domain

While most training programs strive for specific task achievement and often within compressed time parameters, research in human learning has shown that emotions, attitudes, and feelings are significant to effective learning. The implication is that to the extent that training programs fail to generate positive affect (emotions, attitudes, and feelings), they fail to generate effective learning.

Six areas are briefly considered: (1) negative affect and job dependency; (2) communication skills, knowledge, and attitude toward the subject matter; (3) reinforcement and contingency management in the classroom; (4) the target population; (5) interactive instruction; and (6) the use of media for stimulus intensification.

Negative Affect and Job Dependency - While the thrust is to look at positive affect, the effect of job dependency on training cannot be ignored. All too often, the trainee's primary motivation during training is that his job and/or advancement is dependent upon successful completion. Learning itself may run a distant second. In terms of a long-range vested competence, a positive attitude toward learning must be maximized and the threat to job security minimized.

If the trainee is forced to succeed to minimize his risk that is not the same success gained through concept, principle, and problem solving learning. "Playing the game" versus learning produce substantially different long-term results. It is, then, management's responsibility to provide a true learning enviornment. This responsibility includes: (1) generating a positive attitude toward training stressing individual growth and development (and de-emphasizing job dependency); (2) developing an educationally as well as technically competent training force; (3) keeping abreast of new technology in education; and (4) giving appropriate financial and facilities support to technical training areas.

Communication - Beyond management support, communication skills, knowledge, and attitude toward the subject matter itself play important roles in generating positive affect. However, each of these factors must be viewed from a dual perspective - from the point of view of the trainer/instructor and from the point of view of the trainee/learner.

Communication skills become relevant whether considering a traditional classroom environment, a programmed instruction module, or any other medium. Examples using language are obvious - either the instruction matches the learner's language skills or no effective learning can take place. The classic discrepancy is the instructor talking "above" his students. Another common miss is assigning written programs at a level above the learner's reading skills. A less obvious problem occurs with use of visual image. While a visual can, indeed, communicate a multitude of concepts, the clarity of that communication is dependent upon the learner's visual perception.

The question is, how often are these factors considered in the design of a training program. Recently, in my own organization a programmed instruction module used to teach basic circuits and symbols to new hire technical representatives was evaluated approximately four grade levels higher than the average reading skill of the user. However, the same module matched the skill level of the designer almost perfectly. There are two choices: (1) bring the learner's reading level up; or (2) bring the reading level of the module down. But, even more important, bring the designer's awareness of the problem up.

The example may seem almost too simple. However, communication skills are often assumed and seldom measured. The measure is relatively simple and can, perhaps, be even subjective. If a discrepancy is allowed to exist, the motivation level of the learner must go down through pure lack of attention and/or inability to attach any meaning or understanding to the training program.

Knowledge also affects the learner's motivation. However, a discrepancy between the learner's knowledge and the instructor's knowledge is not adverse, but, in fact, necessary. The assumption is that the instruction will increase learner knowledge. This increase is a factor of learning not teaching per se. In other words, the instruction itself is merely a vehicle to enhance learning and therefore should be learner oriented not teacher oriented as already indicated

This is a rather subtle point and can be expressed through the following example. In a recent training program a student was unable to recognize the conceptual distinction between teaching and learning. The argument was that there is a one-on-one correlation between what the teacher teaches and what the learner learns. This may be for simple memorizing tasks, but not for more complicated problem solving tasks. A case in point with the aforementioned student is that the subject matter (or what the teacher was teaching) was the distinction between learning and teaching. If, indeed they are related one-to-one the problem should have never occurred.

The point is, when developing a training program focus the instruction on learner behaviors rather than teacher behaviors. This would particularly apply to the instructor's guide itself. They tend to focus on timetables and instructor activities to the exclusion of any learner activities. It is only through learner behavior that one can measure the effectiveness of the program.

A final area in communications is attitude toward the subject matter itself. Here, the instructor plays an important role - his positive attitudes will generally positively affect the student and his negative attitudes will generally negatively affect the student. However, keep in mind the distinction between a negative attitude and constructive criticism. There is almost always a place for the latter. Take a simple example - a problem area in a machine in terms of reliability and/or maintainability. The learner can be told or the instructor can infer that the designers must have been asleep or the learner can be honestly cautioned of certain problem areas and that one of the challenges on his job is to keep these in check. In either case the "self-fulfilling prophecy" will take over. The learner can develop a negative attitude or he can accept the challenge.

Reinforcement - Perhaps, the most powerful tool available in training is positive reinforcement of desired performances. The trainee must be constantly made aware of his progress. Reinforcement, to be most effective, must occur in three modes: (1) performance/contingency management in the classroom; (2) content and skill practice and critiquing during training; and (3) performance evaluation on-the-job.

In the classroom the instructor needs to consistently give the learner feedback in terms of his progress in meeting the objectives of the performance system. The single most important consideration is the immediacy of the feedback to the performance. Beyond simple one-time acknowledgement of a performance, important skills need to be reinforced throughout the training cycle. Few times will one-time feedback assure skill acquisition over an extended period. If proper attention is paid to a system sequence, the program becomes self-reinforcing through a behavior building, and/or shaping approach. Finally, an evaluation, on-the-job, of skill usage is a single most important step in tying training performance to on-the-job performance.

The Target Population - Apart from any skill considerations, the performance system is also dependent upon an awareness of the enviornmental conditions from which the trainees are emerging. To deal effectively with attitude in the classroom, to get the trainee to make a critical judgment about the content, and finally, to get the trainee to develop a philosophy about the conceptual input he is exposed to, some understanding of his background and work environment is essential.

A "perfect" content presented to a group in an unacceptable manner loses much of its potential impact. Ask yourself the following kinds of questions.

- Are there cultural distinctions among the various groups of trainees?
- Does the trainee have reason to believe training is a waste of time for him?
- Was the trainee properly prepared to come into a formalized training session?
- Will his past work experiences pose particularly difficult problems in teaching him "our" system?
- Are there pressures on-the-job that make him reluctant to take time out for further training?
- Is he particularly sensitive about who or where he is?
- During training is his living environment properly provided for?

Again, any of these factors may impact the performance system.

Interactive Instruction and Media - The final points to be made simply involve maintaining attention. From a communications viewpoint, learning cannot take place in any meaningful sense unless the attention of the learner is maintained. The more interactive the instruction through the use of questioning technique, role play, simulations, labs, and the like, the better the chance of maximizing attention. Media, while it should be directly associated with a learning objective also, by their very characteristics enhance the process of attention. This is especially relevant in industrial training where programs run over a forty-hour week.

Summary and Conclusions - The primary focus of a system, then, is the learner, the trainee. The system needs to specifically designate, measure, and reinforce performance. The performance itself needs to consider the on-the-job skills and knowledges. And finally, while the system provides content consistency and relevance, the attitudes surrounding that system from the trainer, trainee, and management perspectives are paramount to the desired outcomes. The instructional system in the final analysis is a learner, position relevant, performance oriented training tool, considering content and attitude designed for constant evaluation and update.

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Section Six:

Need for Curriculum for State Personnel Development Supervisors

Curriculum Status for Preparing State Personnel Development Supervisors

by Robert U. Coker*

Federal legislation in the form of the Vocational Education Act of 1963, Education Professions Development Act of 1967, and the Vocational Education Amendments of 1968 has provided the needed encouragement and upgrading of professional and paraprofessional personnel in vocational education. Prior to the enactment of this federal legislation, the training of personnel to assume positions in state vocational education agencies received only token attention nationwide. It was assumed that people with interest and potential would move up through the ranks to fill the emerging positions in state vocational education divisions, but the demand for personnel to assume greater leadership roles made this practice unsatisfactory and new training programs were needed (Evans, 1971).

The passage of Education Professions Development Act of 1967 and the Vocational Education Amendments of 1968 and the increased emphasis given to training programs indicates a need for increased coordination of personnel development programs.

The responsibility for these personnel development programs, which includes teachers, supervisors, and administrators, appears to be two-fold: (1) in a broad sense, higher education institutions' role encompasses providing education for those persons enrolled in preparatory programs—whether it be preservice or in-service education; and (2) state vocational education divisions have the responsibility to coordinate all major activities within a state concerning vocational education. These points are supported in the Federal Register (Vol. 35, No. 91, p. 7339): "State boards shall provide for personnel training (both preservice and in-service) as is necessary to provide qualified personnel meeting requirements of the state plan pursuant to S102.38." A successful state program of education must consider both preservice and in-service activities of educational personnel. Neither agency (university or state departments of education) can isolate itself from the other and expect to have a unified program for personnel development.

It is apparent that adequate policies and procedures must be developed and implemented by state departments of education and/or individual vocational education divisions in order to establish clear communication channels among the different levels of authority concerning personnel development within a state. An adequate supply of quality programs and quality personnel is contingent upon the type leadership found within a state.

Providing this leadership needed for personnel development activities is dependent to a large degree on the personnel employed in state education departments and/or divisions. Related to this aspect is the primary subject to be addressed today. In addressing this subject my remarks are to be presented in three parts: (1) need for state personnel development supervisors; (2) a synthesis of a research project funded by The Center for Vocational Education entitled "Changing Roles and Functions of Leadership Personnel in State Vocational Education Agencies" which serves as a background for; (3) a report of a study concerning "Curricula Status for Preparing State Personnel Development Supervisors."

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Need for State Personnel Development Supervisors

The need for comprehensive personnel development is not a new concept; rather, it has been recognized throughout the history of American education. At no other period in our history has the coordination of comprehensive personnel development been more important. Not only must training programs be updated and expanded, but additional personnel are needed to regulate and coordinate training programs on a continuing basis. Lamar (1971, p. 35) stressed the need for vocational education to establish a continuing program of professional development. He stated that, "The conceptualizing, planning, and informative systems are dependent upon people—persons with specialized competencies."

The need for a coordinated effort of personnel development was further supported in 1972 at the National American Vocational Association Convention in Chicago, Illinois. A national association for personnel development was proposed and a constitution was ratified to form the American Vocational Education Personnel Development Association. A major implication in forming this national association was to provide emphasis and direction to personnel development activities from a national standpoint.

The Education Professions Development Act of 1967 and the Vocational Education Amendments in 1968 provided the needed stimuli for establishing state personnel development divisions within each state's vocational education agency. Schaefer (1972, p. 5), in a speech delivered at the Fourth Annual State Directors Seminar, stated:

> . . . the one glowing light on the horizon is Part F of the EPDA. But even this and especially Section 553 will be squandered away by most states for lack of systematic and longitudinal planning if we are not careful. . . to the designers and operators of the EPDA effort our hats should be taken off for it represents a bold first step to a comprehensive system of personnel development.

In a study of the demographic characteristics of state level vocational education agencies, Koble and Coker (1973) found that thirty-eight state vocational education divisions employed supervisors of personnel development and had organized programs for personnel development. They also reported that the number of supervisors of personnel development programs within states is projected to increase by 60 percent by 1977. This projection may reflect a recognition by state agencies that personnel development programs, to prepare personnel development supervisors, need to be improved and expanded. Furthermore, 19 percent of state vocational education divisions reported that it was a "major problem" in their states to recruit and hire qualified persons as supervisors of vocational education personnel development.

The National Advisory Council on Education Professions Development (1973, pp. 102-104) recognized that although several levels of planning concerning comprehensive personnel development efforts exist in various states, additional levels were needed in a comprehensive personnel development plan:

1. Determination of quantitative needs for various types of personnel
2. Determination of qualitative needs for various types of personnel
3. Structure for vocational education professions development by universities
4. Structure for vocational education professions development in local, state, and federal agencies
5. Initial certification of educational personnel
6. Continued certification of educational personnel

The Council gave sub-levels under each major level listed above. Planning levels were deemed necessary before an adequate comprehensive plan for personnel development could take place. Progress has been made at each planning level, according to the Council (p. 106), but the least amount of progress has been in "the initial and continued certification of vocational teachers and . . . in expanding cooperative and exchange programs with business and industry for training of teachers." The greatest amount of progress appears to have occurred in the area of developing organizational structures for personnel development at the state level. This is not meant to imply that personnel development activities have not taken place in years past. Rather, the meaning is that the job has grown to the degree that there is a need to have persons whose primary responsibility is coordinating personnel development activities and not consider them as other duties assigned.

Background Information

A research project funded by The Center for Vocational Education entitled "Changing Roles and Functions of Leadership Personnel in State Vocational Education Agencies" was seen by Koble, et al., (1973) as a step toward the development of curriculum for state leadership-type persons. Six job cluster areas in state vocational education agencies were identified. These were: (1) state director of vocational education; (2) assistant state director of vocational education; (3) supervisor of vocational instruction services; (4) supervisor of personnel development; (5) supervisor of vocational research and planning; and (6) supervisor of vocational finance.

No attempt was made in the Koble state leadership project to assess what leadership development programs were available in higher education institutions and to what extent these programs were preparing persons for state vocational education leadership positions.

In order to assist in the establishment of a knowledge base for one job cluster (state supervisors of personnel developments), a study was conducted to determine the status of curricula for preparing state personnel development supervisors including both initial preparation (preservice) and continuing professional development (in-service). Only one job cluster area was chosen for investigation so that a comprehensive study could be completed within a given time. The study used the fifty-five most critical tasks performed by state personnel development supervisors which were identified by Koble, et al., (1973) as the base to determine this curricula status.

The Problem

The job cluster of state personnel development supervisors is relatively new and has received much emphasis since the Vocational Education Amendments of 1968. Koble, et al., (1973) identified fifty-five of the most critical tasks which state personnel development supervisors must perform in order to be effective in their positions.

Little research had been completed on describing the curricula for preparing state personnel development supervisors to perform effectively. Therefore, it was not known if the curricula offered in colleges and universities prepare these supervisors to perform the fifty-five tasks identified by Koble, et al., (1973). Thus, there was a need to describe these curricula in order to discover what course contents were presently being offered.

In addition, there are differences in vocational education preparation programs at different colleges and universities. This was indicated when eleven institutions were initially chosen to receive Education Professions Development Act (EPDA) grants and later when seven institutions were selected to receive federal grants. Therefore, this study also described the differences between curricula in institutions preparing state personnel development supervisors in colleges and universities receiving EPDA grants and those not receiving EPDA grants.

Objectives

The following objectives served as a guide for the study:

A. To describe the opinions of chairmen of vocational education departments concerning whether they had or did not have curricula for preparing state supervisors of personnel development with the competencies to perform the fifty-five tasks identified by state personnel development supervisors.

B. To determine the degree to which chairmen of vocational education departments supported or rejected the concept of a specific curriculum designed for and focusing on the needs of state personnel development supervisors.

C. To compare the opinions of chairmen of vocational education departments in those institutions that received EPDA grants with those colleges and universities that did not receive EPDA grants, concerning whether they had or did not have curricula for preparing state personnel development supervisors to perform the fifty-five tasks identified by state personnel development supervisors.

Methodology

The target population consisted of 127 chairmen of vocational education departments in eighty four-year institutions of higher education. Chairmen of vocational education departments in institutions of higher education were defined as those persons serving as heads of departments. The population was stratified according to those four-year institutions of higher education that received EPDA monies and those that did not receive the federal EPDA monies.

Koble, et al., (1973) identified a list of tasks state personnel development supervisors perform in their positions. A mailed questionnaire was constructed based upon Koble's list. The questionnaire was validated by a jury of experts from The Ohio State University and was field-tested by requesting selected individuals in vocational education in four-year institutions of higher education to evaluate the questionnaire's clarity. After validation, evaluation, and revisions; questionnaires with cover letters were mailed to all chairmen of vocational education departments in colleges and universities in the United States.

The questionnaire was designed in two parts. Section I of the questionnaire was designed to describe the opinions of chairmen of vocational education departments concerning whether they provided instruction related to the tasks as identified by the state personnel development supervisors. Section II of the questionnaire was designed to determine the emphasis given to curricula activities that pertained to state personnel development supervisors. In addition, selected variables were studied as to the difference between chairmen's opinions in those institutions that received EPDA grants and chairmen's opinions in those institutions that did not receive EPDA grants.

Responses were obtained from ninety-three of the 127 department chairmen identified, which was 73 percent of the population. Descriptive statistics were used to analyze data.

Data obtained from the non-respondents were not significantly different from data gathered from respondents on the same questions. Therefore, it was concluded that the data gathered from the ninety-three respondents were representative of the 127 chairmen of vocational education departments which were identified as the target population for the study.

Summary of Findings

Status of the Fifty-five Tasks

Vocational education departments vary considerably in providing course content for developing competencies for performing the fifty-five tasks associated with the position of state personnel development supervisors. Twenty-one respondents reported that no course content for preparing state personnel development supervisors was available in their curricula. Fifty chairmen (75.8 percent) reported their departments included content for at least twenty of the fifty-five tasks but no vocational education department included all fifty-five tasks in their course content. Task statements that dealt with "maintaining long-range planning procedures, collecting data for evaluation of present and future personnel needs, and determining new developments and trends in vocational education" were included with greater frequency.

The chairmen considered all fifty-five tasks to be "moderately" or highly important to a supervisors' success on the job. However, the departments are only "slightly" to moderately effective in developing competencies to perform the tasks (See Appendix A for specific rating assigned each task). Task statement "evaluate present and future needs for vocational personnel" received the highest rating given the variable importance. Regarding degree of department's effectiveness, tasks involving "maintaining long-range planning procedures, determining new trends, developing personnel development programs, planning programs, collecting data for making curricula decisions, and evaluating present and future needs" were rated highest by chairmen.

In-service curriculum was judged to be the most frequent method being used to prepare state personnel development supervisors with competencies to perform the fifty-five tasks. The training sources most frequently being used in the in-service programs were vocational education departments (all service areas under one department head) and internship programs.

There are several impediments to implementing curricula activities regarding preparing state personnel development supervisors. However, insufficient number of state personnel development supervisors being trained in chairmen's states was the most "extreme impediment" toward implementation of instructional programs.

Need for Special Curriculum

Chairmen (65.2 percent) "disagreed" or "strongly disagreed" to the need for a special preservice curriculum in their departments; on the other hand, the chairmen (74.2 percent) either "agreed" or "strongly agreed" to the need for a special in-service curriculum designed for state personnel development supervisors.

Difference between EPDA and Non-EPDA Institutions

Data were obtained to provide for a description of the difference between EPDA and non-EPDA institutions on variables of curricula content, importance of the tasks, degree of department's effectiveness, and degree of perceived need for special curricula designed for state personnel development supervisors. There were no significant differences between EPDA and non-EPDA institutions on the variables of curricula content, and perceived need for special curriculum. Non-EPDA chairmen more frequently assigned either a rating of "highly important" and/or "extremely important" to tasks that involve:

1. Administer policies and procedures for dealing with local educational agencies,
2. Develop experimental vocational education programs/courses,
3. Prepare annual state objectives for vocational education,
4. Determine annual state objectives for vocational education,
5. Administer federal vocational education funds,
6. Request federal vocational education funds,

7. Resolve grievances of staff/personnel,

8. Advise legislative groups.

Chairmen in EPDA institutions indicated their departments were more effective in developing competencies to perform the task "evaluate field testing of new programs" and chairmen from non-EPDA institutions reported their departments were more effective in developing competencies to perform the task "recommend field testing of new programs."

Generalizations

Higher education institutions and state vocational education agencies have made progress, but we have not reached the pinnacle in vocational personnel development. In any event, the knowledge base that exist in the literature and opinions based on the findings of this study, establishes a base from which the following generalizations can be stated:

1. Personnel development encompasses the preparation of teachers, supervisors, and administrators for entry level positions and the educational factors concerning upgrading of personnel regardless of what educational level. The role of higher education institutions concerning personnel development is primarily at the preservice level while assisting other agencies with in-service activities. However, their role is increasing due to the new clientele and increasing number and type of vocational education positions.

2. Progress has been made in preparing vocational personnel, but there is a lack of consistent leadership. Based on points made by Venn, Taylor, Koble, Evans and others it appears that unless education institutions and higher education in particular accept the responsibility for vocational education and prepare personnel to manage programs, society will see that another agency does the job. Congressional leaders have given state vocational education divisions the overall leadership responsibility for professional personnel development (Vocational Education Amendments of 1968, Public Law 90-576). Teacher education institutions have been given the responsibility to provide the leadership for preservice programs by state vocational agencies. The educational agency employing vocational personnel, with assistance from all other agencies, has been given the responsibility for in-service education.

The overall organizational structure necessary for program improvement already exists, but additional and expanded programs could be implemented in order to provide consistent leadership in preparing vocational education personnel.

3. Vocational education programs at different educational levels are increasing each year. Increases in the number of programs necessitate additional personnel to manage the programs. The need for persons to fill existing positions and the projections of personnel needed in state vocational education divisions is obvious. It has been projected that all major job clusters in state vocational education agencies will need additional employees by 1975.

4. The term supervisor has been difficult to define as it is used in education. This is also true concerning the roles that supervisors are expected to perform in education. According to the

literature, the chief roles supervisors are expected to perform are: change agent; regulator; stimulator; administrator; advisor; developer; and an implementor. It is felt that this is a large assignment to expect any one person to perform.

5. State vocational education agencies have the responsibility for providing the overall leadership in developing policies and procedures for coordinating personnel development programs. A majority of state vocational education agencies are establishing a separate division, charged with the responsibility for coordinating personnel development within the state. One trend recognized in these different state vocational education divisions is that of using the systems approach for coordinating personnel development. In the systems approach, strong emphasis is directed toward developing supply and demand studies of needed personnel and to the type programs needed to prepare personnel. A broad array of training programs is reported as being used, such as internships, field experiences, short-term workshops, institutes, and a combination of coursework with other training techniques.

6. There appears to be a lack of curricula content in most vocational education departments for preparing state personnel development supervisors with competencies to perform the fifty-five most significant tasks in this job cluster area.

Recommendations

It is recommended that:

1. Additional emphasis be given to including curricula content regarding preparation of state personnel development supervisors, especially in those institutions that have no course content concerning this job cluster;

2. Programs be developed that would prepare state personnel development supervisors to perform each of the fifty-five tasks, especially at the in-service level; and

3. More extensive use be made of internships and education administration departments as training sources for preparing state personnel development supervisors.

Additional areas of research are offered for consideration:

1. That a study be designed and conducted in state vocational divisions to determine what level of performance is needed to perform each of the fifty-five tasks.

2. That a study be designed to assess what curricula are available in disciplines other than vocational education that can be used to prepare state personnel development supervisors.

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APPENDIX A

THE 55 TASKS BY DEGREE OF IMPORTANCE AND DEPARTMENTS' DEGREE OF EFFECTIVENESS IN DEVELOPING COMPETENCY FOR EACH TASK

	Degree of Importance[a]		Degree of Effectiveness[b]	
Tasks	Mean	Standard Deviation	Mean	Standard Deviation
1. Administer cost reduction policies and procedures	3.18	.12	2.18	1.21
2. Advise state education budget review committees	3.70	1.06	2.26	1.27
3. Administer policies and procedures for dealing with local educational agencies	4.15	.92	3.00	1.14
4. Prepare policies and procedures for dealing with local educational agencies	4.13	.70	3.06	1.20
5. Evaluate personnel policies for state divisions of vocational education staff members	3.88	.85	2.80	1.22
6. Maintain long-range planning procedures	4.47	.75	3.26	1.33
7. Develop experimental vocational education programs/courses	3.77	.96	3.06	1.28
8. Prepare annual state objectives for vocational education	4.06	.99	3.15	1.24
9. Determine annual state objectives for vocational education	3.89	.05	2.89	1.24
10. Predict new developments and trends in vocational education	3.74	.07	2.79	1.27

Appendix A — Continued

Tasks	Degree of Importance[a]		Degree of Effectiveness[b]	
	Mean	Standard Deviation	Mean	Standard Deviation
11. Coordinate field testing of new program	3.79	.83	2.58	1.34
12. Establish policies and procedures for allocating surplus federal and state vocational education funds	3.46	1.06	2.15	1.14
13. Approve policies and procedures for allocating surplus federal and state vocational education funds	3.41	1.15	2.24	1.31
14. Determine financial support for personnel development programs	4.15	.85	2.82	1.24
15. Direct task forces to solve special problems	4.03	.86	2.88	1.22
16. Approve budget(s) for personnel development programs	3.92	.90	2.68	1.26
17. Administer financial support for personnel development programs	4.00	1.01	2.89	1.35
18. Evaluate financial support for personnel development programs	4.06	.91	2.97	1.23
19. Approve personnel development programs and methods	3.91	1.05	2.73	1.17
20. Coordinate in-service education programs and activities for local school personnel	4.18	.93	3.20	1.30
21. Determine new development and trends in vocational education	4.02	1.03	3.26	1.24
22. Collect data for establishing educational program evaluation criteria	4.11	.86	3.18	1.32
23. Plan changes in direction/emphasis in local programs of vocational education	3.88	1.12	3.09	1.29

Appendix A — Continued

Tasks	Degree of Importance[a]		Degree of Effectiveness[b]	
	Mean	Standard Deviation	Mean	Standard Deviation
24. Advise on federal legislation	3.75	1.14	2.76	1.36
25. Plan career education programs in the state educational agency	3.80	1.03	2.99	1.42
26. Develop personnel development programs and methods	4.15	.81	3.23	1.31
27. Plan personnel development programs and methods	4.18	.89	3.21	1.17
28. Plan preservice educational programs for state staff/personnel	3.79	1.14	2.73	1.45
29. Plan preservice educational programs and activities for local school personnel	3.70	1.20	3.21	1.30
30. Evaluate strategies for problem-solving about finances	3.61	1.08	2.67	1.37
31. Approve contracts with outside agencies and institutions	3.39	1.14	2.17	1.20
32. Coordinate contracts with outside agencies and institutions	3.59	1.12	2.17	1.25
33. Administer contracts with outside agencies and institutions	3.59	1.15	2.12	1.18
34. Establish contracts with outside agencies and institutions	3.50	1.08	2.23	1.33
35. Recommend contracts with outside agencies and institutions	3.62	1.03	2.20	1.23
36. Prepare contracts with outside agencies and institutions	3.44	1.17	2.18	1.25
37. Plan contracts with outside agencies and institutions	3.55	1.07	2.24	1.30

Appendix A — Continued

Tasks	Degree of Importance[a]		Degree of Effectiveness[b]	
	Mean	Standard Deviation	Mean	Standard Deviation
38. Approve federal vocational education funds	3.73	1.25	2.59	1.47
39. Administer federal vocational education funds	3.78	1.24	2.76	1.29
40. Request federal vocational education funds	4.26	1.15	3.06	1.25
41. Monitor federal vocational education funds	4.03	1.20	2.85	1.37
42. Plan vocational education program funding needs	4.23	1.06	3.20	1.27
43. Analyze data for making decisions about finances	4.09	1.05	3.00	1.22
44. Evaluate staff meetings for personnel in the division of vocational education	3.68	1.04	2.85	1.47
45. Collect data for making decisions about curriculum	4.06	1.02	3.41	1.20
46. Resolve grievances of staff/personnel	3.70	.96	2.82	1.35
47. Prepare applications to funding agencies for financial assistance	3.71	1.06	2.69	1.36
48. Evaluate field testing of new programs	4.18	.78	3.24	1.30
49. Recommend field testing of new programs	4.08	.92	3.13	1.30
50. Advise personnel development agencies and institutions	3.88	1.03	2.58	1.28
51. Determine cost effectiveness for programs of personnel developments	3.97	.93	2.72	1.16
52. Evaluate cost effectiveness for programs of personnel developments	3.97	.94	2.68	1.24

Appendix A — Continued

	Degree of Importance[a]		Degree of Effectiveness[b]	
Tasks	Mean	Standard Deviation	Mean	Standard Deviation
53. Evaluate present and future needs for vocational personnel	4.48	.66	3.27	1.26
54. Advise legislative groups	4.18	1.02	2.85	1.30
55. Promote orientation programs for new local education agency personnel	4.00	1.00	2.97	1.33
Composite mean for all 55 tasks	3.81		2.81	

[a] Degree of Importance - (5) extremely important, (4) highly important, (3) moderately important, (2) slightly important, (1) not important.

[b] Degree of effectiveness - (5) extremely effective, (4) highly effective, (3) moderately effective, (2) slightly effective, (1) not effective.

Section Seven:

Implementing Career Education Programs

Leadership Responsibilities for Vocational Education in Career Education: A New Look

by Kenneth B. Hoyt*

Introduction

In 1962, I appeared before this group and asked your help in fostering the development of post high school vocational-technical education. Today, I come asking your help in fostering implementation of the career education concept. The basic dynamics involved are strikingly similar in that now, as then, I was convinced of (a) the importance of the concept, (b) the crucial role state directors of vocational education must play in solving the problem, (c) the absolute necessity for involvement of forces outside vocational education in seeking solutions, and (d) my own inability to formulate a final blueprint for use in solving the problems that seem to me to be present.

Now, as then, I feel much more knowledgeable about the problem than the solution. If, twelve years from now, you have devoted the same amount of energy, expertise, and commitment to career education as you have, during the past twelve years, to the problem of post high school vocational-technical education, I have no doubt but that real progress will have been made. It is in hope that this will occur that I appear before you today.

There are three goals here. First, I want to give you a very brief capsule summary of career education's current status. Second, I want to characterize and discuss several major attitudinal problems currently facing career education. Finally, I want to leave time to listen to the good advice I know you can give me in terms of suggested problem-solving actions.

Current Status of Career Education: A Capsule Summary

Since coming to USOE in February 1974, I have had opportunity to gather some data, study other data, and observe much regarding career education in the United States. Here, without boring you with statistics, I would like to summarize the current status of career education as it now seems to me. The total picture demands that I give you both some positive and some negative perceptions.

In a positive vein, I think it is safe to say the following: (1) local school enthusiasm for career education is greater than that seen at the SEA level, but SEA efforts are greater than the current federal effort; (2) good consensus exists among career education leaders at the national, state, and local levels regarding the basic nature, goals, and implementation strategies for career education; (3) some positive evidence related to the effectiveness of career education is now present; (4) the professional literature voicing opinions regarding career education continues to be more positive than negative; and (5) the financial base for support of career education has been extended beyond that derived from vocational education monies. Data are available to substantiate each of these observations.

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I see no sign that interest in or enthusiasm for career education is on the decline. True, the sources of interest and support have shifted somewhat during the last three years, but that is another matter.

On the negative side, it seems to me that we must face the following kinds of sobering facts: (1) implementation of career education has occurred primarily at the K-8 level with much less emphasis in our senior high schools and very sparse emphasis at the community college, four year college and university, or adult education levels; (2) the quantity of the career education effort has far outstripped its quality; (3) career education remains largely a matter of over-promise and under-delivery for such special segments of the population as the poor, the physically and mentally handicapped, minorities, the gifted and talented, and for females; (4) large segments of the professional education community remain distrustful of career education—and large segments of the general public have not yet even heard of it; and (5) the true collaborative effort—involving the formal educational system, the business-labor-industry-professional-government community, and the home and family—called for by career education has yet to take place.

Such negative facts are, to me, discouraging but not defeating. If I were not convinced that each could be overcome, I would not name them in so specific a fashion. Each fact is, to me, rooted in attitudes that must be changed. I want now to devote the remainder of this paper to a discussion of such attitudes.

Basic Attitudinal Problems Facing Career Education

The common criticisms of career education voiced in the literature grow basically out of misunderstandings. They include such charges as the following: (a) career education is anti-intellectual; (b) career education will lower our standards; (c) career education is anti-humanistic; (d) career education is trying to keep students out of college; (e) career education is a subterfuge for the expansion of vocational education; (f) career education will mean tracking of students; (g) career education has not been clearly defined; and (h) career education is inviting external control of our schools. Each of these charges can be and has been answered (Hoyt, 1974).

The problems I want to discuss here have not, to date, verbalized as part of the career education controversy. In effect, they constitute what might be considered the "hidden agenda" of resistance. I have serious questions regarding how each should be solved. I want here to specify the problems and seek your assistance in solving each.

"Where's the Money?"

The first problem can be characterized as a "where's the money" attitude. The sources of this problem seem to me to be two in number. One source is in those who seem to believe that, if something isn't expensive, it cannot be very important. By judging the importance of a given educational activity only in terms of the proportion of the educational budget allocated to it, they assign career education a low priority because it requires relatively few funds. The second source of this attitude is found in those who have never experienced any major change in American education coming about unless the federal government induced schools to change through providing massive financial support programs. Such persons, upon observing the sizeable federal demonstration grants for career education in the last three years, say, in effect, "I, too, am ready to initiate career education - where's my $500,000?"

Two items - physical plant and equipment costs plus staff salaries - account for over 90 percent of the cost of education. Career education does not demand new buildings or rooms since it is not seen as a separate "course." It does not demand expensive equipment since most of its materials are either "homemade" by teachers and students or donated by the community. It does not require a large staff since its basic rationale calls for all staff members to be involved. For all of these reasons, the amount seen as required for the implementation of career education is bound to represent a relatively small portion of the total educational budget.

To date, my basic strategy has been one of asking school administrators - building principals and superintendents - to assume leadership roles in career education. Reasons for employing this strategy include: (a) career education demands coordination of all educational personnel and this should be a function of the administrator; (b) career education is dependent on establishing collaborative relationships with the community which, in turn, depends on basic school policies for which administrators are responsible; (c) I am fearful that, if "career education specialists" are appointed, other staff members will be reluctant to assume career education responsibilities; and (d) I am fearful that any new school program calling for increasing school budgets substantially will not be well accepted by the taxpayers. Thus, I have been championing a concept that holds that, while career education is exceedingly important, it does not have to be expensive.

Perhaps this strategy is wrong. If so, we must immediately begin to face problems associated with the preparation and employment of career education coordinators and specialists. Such thoughts raise, in my mind, the spector of M.A. and Ph.D. degrees in career education, the establishment of certification requirements for career education personnel, and the formulation of something probably called the "American Career Education Association." I am very afraid that, if these things happen, our goal of using career education as an integrative vehicle is doomed to failure. The problem must be discussed. Stated simply, it is "Do we need special personnel in order to operate effective career education programs?" Your advice on this matter would be most deeply appreciated.

"If I Can't Control it, I'm Not Interested"

The second problem can be characterized as a "If I can't control it, I'm not interested" attitude. One of the prime complaints of labor union leaders, for example, is that they are not being consulted regarding work experience and work study aspects of career education. Business leaders want a voice in determining matters related to field trips and the use of their personnel as resource persons in the classrooms. The Council of Chief State School Officers has issued strong statements regarding their leadership rights and responsibilities in career education. The National Education Association leadership has declared that the classroom teacher is the key to a successful career education effort and must be deeply involved in career education program decisions. Even these few examples will serve to illustrate the seriousness of the problem.

Coming closer to home for the vocational education community, it is obvious that some vocational educators lost interest in career education when career education began to voice concerns that extended beyond vocational education. In some states, vocational education funds have been withdrawn from career education with no apparent concern for the effect such withdrawal may have on the total career education movement. It is almost as though, if a given activity is not fully supported by vocational education funds some vocational educators develop a lack of trust in the activity due largely to the fact that they do not totally control it.

To me, this seems very strange indeed. The AVA resolution on career education, passed in Atlanta in 1973, simultaneously expressed a continuing endorsement for career education along with a plea that additional funding sources be found. That resolution, as I read it, said nothing about withdrawing all vocational education funds from the career education movement.

For my part, it makes no more sense for vocational education to move away from career education than for career education to move away from vocational education. Career education and vocational education need each other. As career education moves beyond vocational education, it must be sure to never move away from the field of vocational education. A very great deal of my energy is, and will continue to be, dedicated to making sure that this does not happen.

The essential strategy I have been using is one of seeking a small amount of money specifically earmarked for career education. I hope to use this money to encourage such additional funds as are needed from all other parts of education and from the business-labor-industry-professional community. This strategy is based on an assumption that control of any enterprise is, in many ways, operationally defined by its funding sources. I have assumed that, if fiscal responsibility can be shared, then the collaborative goals of career education can and will be met. I think all parts of our formal educational system should have a voice in forming career education policies and that both the business-labor-industry-professional-government community and the home and family structure should also have such a voice. This strategy will be most difficult to implement unless fiscal responsibility for career education is shared.

Perhaps this strategy, too, is wrong. The alternative, of course, is to seek categorical career education funds in sufficient amounts to fund all career education efforts. At the federal, state, and local levels, this would constitute a major change in policies now in common existence. This, then, is a second matter on which your advice is badly needed.

"What's Mine is Mine"

A third serious problem can be seen as a "What's mine is mine" attitude. So long as career education was viewed as simply a concept, an attitude, and a point of view, this problem did not exist.

That is, where there is no substance, nothing is "taken away" from anyone. It was only when people in career education began to think in terms of programs, rather than simply concepts, that this problem arose.

At this point in time, most persons who write about career education are doing so in programmatic terms. They speak about career awareness, career exploration, career decision-making, career preparation, career entry, and career progression (including reeducation) as programmatic elements of career education. Career education programs are being organized in ways that emphasize the important contributions many parts of the formal educational system and the broader community make to various aspects of career education. This trend towards speaking programmatically about career education was, in its early stages, strongly reenforced by the 1971 "Position Paper on Career Education" issued by the State Directors of Vocational Education in which the following statements appear:

> It is this latter component of Career Education—that of opportunity to prepare for employment—which can be well-served by contemporary programs of occupational education. To deny this climaxing opportunity is to nullify the purpose of Career Education. . . .
>
> 2. Career Education is not synonymous with Vocational Education but Vocational Education is a major part of Career Education.

Note that, in this 1971 statement, the State Directors of Vocational Education, while intent on carving out a major part of career education for vocational education, emphasized strongly that it was career preparation they were speaking about and that they did not claim other parts of career education as belonging in vocational education.

In a strategy sense, I have been attempting to emphasize the multiple involvement of a wide variety of kinds of personnel - both from within and outside of the formal educational system - in each of the programmatic components of career education. Rather than assign each component to a different segment of persons, I have been trying to demonstrate that, by working together in a collaborative fashion, many segments of both Education and the larger society can make valuable contributions to each of career education's program components. Usually, I think of one kind of personnel as key but with supportive assistance from many others. For example, I think of the elementary teacher as a key person in career awareness, but I look for involvement of parents, counselors, vocational educators, and resource persons from the business-labor-industry-professional community in the total career awareness component of the career education program. I tend not to worry about who gets "credit" for helping students, but, rather, how much help the student receives in this component of career education.

Similarly, I contend that, while vocational educators play a major role in occupational preparation, important roles are also played by academic educators for college-bound students and by business and labor personnel for all students. When I think about the career decision-making component of career education, I see the career guidance specialist playing a key role, but I do not see him or her as the only functionary in this component of career education. It is this kind of true collaboration that, in my opinion, will allow career education to serve as an integrative force that will bring many parts of the educational system and the larger society together in seeking to attain the goals of career education.

In terms of legislative strategy, my current position is that I would strongly support efforts of both AVA and of APGA to fund functionaries (personnel) from both fields in a wide variety of career education's program components. I do not feel I can support efforts to claim that the functions themselves are the exclusive right of either vocational education or of guidance personnel. The functions should, it seems to me, be supported in career education legislation. The plea I make is an "anti-turfsmanship" one aimed at assuring that no single part of Education assumes control of any given component of career education. Unless this "anti-turfsmanship" strategy succeeds, the collaborative and integrative goals of career education cannot be met.

At this point, I very much need and want some direct advice. If I am simply "tilting at windmills" where there is no real danger, I need to understand that this is so. If, on the other hand, you agree with me that a problem exists, then I need suggestions and assistance in solving it.

"What's in It for Me?"

Finally, a fourth problem can be thought of as a "What's in it for me?" attitude. The entire research base of the psychology of motivation is illustrative of the fact that no mortal person engages in endeavors that promise no hope of personal benefit. For career education to seek the collaborative efforts of all education personnel, personnel from the business-labor-industry-professional-government community, and from the home and family structure demands that each segment see some sensible answer to the "What's in it for me?" question. The obvious danger, with a movement such as career education which is still young, weak, and undernourished, is one of over-promise and under-delivery. What can and should we promise to those we seek to involve in career education?

To date, our promises have been much more prominent than our products. Among the promises we have made are the following:

- We have promised teachers that, if they follow a career education approach, both they and their students will enjoy school more
- We have promised both parents and businessmen that a career education approach to education will result in students increasing their achievement levels in the basic academic skills
- We have promised vocational educators that career education will raise the status of vocational education and that vocational education will become a true choice to be considered by all students
- We have promised counselors that, in career education, they will have a key and crucial role to play that will increase both the need for and the status of counselors
- We have promised the business-labor-industry-professional-government community that a career education emphasis will result in more persons leaving our educational system equipped with vocational skills, with good work habits, and with a desire to work.

- We have promised students, at all levels of education from the elementary school through the university, that a career education emphasis will help them discover a more meaningful set of reasons for learning

- We have promised the humanists in Education that, by including unpaid work as well as paid employment in the career education concept, career education will have a humanizing, rather than a dehumanizing, impact

- We have promised the liberal arts educators that we will emphasize education as preparation for work as one among several basic goals of Education in ways that neither demean nor detract from other goals

- We have promised minorities, the economically disadvantaged, the physically and mentally handicapped, the gifted and talented, females, and adult education students that career education is intended to meet their needs to find work that is possible, meaningful, and satisfying to them.

We have promised all of these things because we have faith that career education can, indeed, deliver on each of these promises. People have believed us and, according to CCSSO preliminary data, approximately 5,000 of the 17,000 school districts in the United States have initiated some form of career education effort. Yet, the hard truth is that, three years and over 60 million dollars of expenditures later, we are essentially still asking all of these groups to accept career education on the basis of our faith in this movement.

Our strategy has been one of concentrating our major operational and evaluation efforts at the point of least resistance - the elementary school. We have hit first that part of education where the least amount of change is needed and where our chances of obtaining positive results appeared to be greatest. This strategy assumes that, if we can demonstrate concrete successes at the elementary school level, other levels of education will be encouraged to move in a career education direction. We have purposely, it seems, stayed away from a concentrated emphasis on those points in education where the results would be most dramatic - i.e., the transition from school to the world of paid employment - because the risks of failure, in these days, seems extremely great.

It may well be that, if we are really serious about attaining the integration of vocational and academic education, we should be concentrating our efforts at that level of education where the two have been in most obvious conflict - the senior high school. Such a strategy, while holding high potential for negative short-term results, also holds high potential for making clear to all concerned the basic concepts of career education in terms of the challenges for change that they hold. Again, we are faced with a problem on which both help and advice is badly needed. Are we promising too much? Are we concentrating delivery of promises on the wrong people and at the wrong levels? What strategy will best ensure the long run survival and success of the career education movement?

Concluding Remarks

The National Association of State Directors of Vocational Education has, since the inception of career education, played a key leadership role in both the conceptualization and the implementation of career education. As a result, the career education movement has evolved in ways that closely approximate the conceptual view contained in the association's 1971 Position Paper on Career Education. That paper has served as one of my "bibles" in my efforts to further career education. It is now time to assess the results and to decide whether or not the 1971 position of the association should be reaffirmed or revised. I hope that these remarks may be helpful in making such an assessment a reality.

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The Place of Vocational Education Preparation in Career Education

by Albert J. Riendeau*

It was not surprising to me that Ken Hoyt, sometimes referred to as the Will Rogers East of vocational education, should come across so strong on the subject of career education in the states. During his brief tenure with the Office of Education he has racked up an impressive record for getting things done, sometimes despite the barriers imposed by a bureacracy which has yet to adjust to the Hoyt style of operation. It will be interesting to try to keep up with the career education movement with Ken now setting the pace at the national level. I say this with full knowledge of his claim that, (1) he is on loan from his university for a two-year period, and (2) he doesn't really understand the bureaucracy. Knowing how this man thrives on challenges it wouldn't surprise me to see Ken extend that two-year period considerably. As for his second claim, most of us at the Washington office are amazed at how much this man has learned during the few months he has been with us.

The place of vocational education preparation in career education has already been discussed by two of our speakers today. Mitch Brickell described career education programs on the international scene as those including vocational education. "Career education can be described as a lifelong activity embodying many educational programs," he said "not the least of which is vocational education." He attributed its progress to date as a response to a long-felt need by the developed nations of the world for educational updating.

There never was a question of the important role vocational education would play in the career education movement. Vocational education has a long and impressive history, recorded by school districts across the land ever since the vibrations set in motion by the Smith-Hughes Act were first felt. In many cases, potential non-learners were transformed into useful, contributing citizens who participated importantly in making America the most technologically advanced nation in the world. The story of vocational education has been told countless times, by many of you in this room, and it will be told again and again, as the occupational needs and their educational implications for schools and colleges continue to change in the regions, the states, and in the districts.

The need for educational updating referred to by Dr. Brickell earlier is readily apparent to anyone making even a cursory examination of the printed media. For example, the September 1974 issue of Phi Delta Kappan carries the results of an attitude survey conducted by George Gallup, the famous pollster. This is the sixth Annual Gallop Poll of Public Attitudes Toward Education in

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America. In the opinions of a cross-section sample taken of 1,702 adults (called a modified probability sample of the nation), and a sampling of 250 students, ten problems were identified as being the most pervasive in our schools. These were:

1. Lack of discipline
2. Integration/segregation problems
3. Lack of proper financial support
4. Use of drugs
5. Difficulty of getting "good" teachers
6. Size of school/classes
7. Parents' lack of interest
8. School board policies
9. Poor curriculum
10. Lack of proper facilities

Please note that three of the top four problems relate in various ways to the problem of student behavior - the kind that makes the newspapers. The study indicated that students themselves named the same three problems: discipline, racial problems, drug use.

Schools are faced with the problem of what to do with the non-interested student. Of the five proposals offered, the highest favored plan called for "special courses which would train students for jobs," another called for business and industry to provide on-the-job training as a substitute for regular school. Another plan called for a work-study program. All of these are variations of vocational education, in case you hadn't noticed!

Since career education, with its important component, vocational education, appears to more nearly measure up to meeting the current educational needs of the youth in our society, we should ask ourselves how successful we have been in delivering such educational services at all governmental levels. Are there ways we can improve the delivery at the federal level? The state level?

Last December, members of the Division of Vocational and Technical Education attempted to identify some of the leading issues in vocational education around the country by studying the state plans. From a longer list prepared by Dr. Otto Legg, I call attention to the following issues:

1. There is a need for improved federal-state-local planning in vocational education.
    a. Missions at each level should be prioritized
    b. Analysis of collected data could be improved upon

   c. State plans are imprecise — needed is a cooperative effort to improve their usefulness

2. There is a need for clarifying the role of vocational education in the career education movement.

3. There is a need for greater precision in identifying and reporting programs and services being provided to the disadvantaged, the handicapped, and the cooperative and work-study students.

4. There is a need for identifying the implications of the energy crisis in terms of occupational needs and vocational education adjustments to meet emerging manpower demands.

5. There is a need for a careful assessment of preservice and in-service education for vocational teachers and administrators.

6. There is a need for expanding the limited curriculum revision efforts reported, as well as for improving the articulation of knowledge and skills among and between levels of vocational education.

7. There is a need for improving communications between the state and DVTE.

A closer examination of the above list will indicate that all items could probably be subsumed under item 7. All of us realize that communications, to be effective, must be two-way. DVTE needs your input, but we are acutely aware of your need for inputs from DVTE also. With this thought in mind, Dr. Rumpf has informed me that he would be sending to each of you the fiscal year 1975 OPS (Operational Planning System) in the very near future. These have not yet been completed, nor have they been officially approved, but being an eternal optimist I should estimate that you will be hearing from Dr. Rumpf on this subject within a month.

International Perspectives on Career Education

by Henry M. Brickell*

The UNESCO 34th International Conference on Education dealt with innovation and with career education—terms that are virtually synonymous today to those of us interested in vocational education. As one of four delegates from the United States to that conference, I want to draw heavily on what took place in Geneva in giving international perspectives on career education.

Why go abroad? Why leave the United States to study career education? Primarily to see home with a new perspective. What you learn most about is not the other countries, but your own: not about career education elsewhere, but about career education here.

I speak without fear of contradiction about career education worldwide because I don't think there are any genuine experts on the topic in this audience, or perhaps anywhere else. The world's 130 nations are too many and career education is too new for anyone to speak with authority about career education worldwide. There is too much novelty and too much diversity even in a single giant country like Russia. So rather than trying to describe career education worldwide, I want instead to reflect on how career education in the United States looks when viewed from an international perspective.

Bill Pierce headed the four-man delegation to Geneva. If he were speaking here this morning himself, he would undoubtedly offer different perspectives on career education as seen through his own eyes. And so would others of you in this audience who have been abroad. For example, I have with me this morning the report of the European Study Seminar, just published. Last April and May, Bob Van Tries and Jack Struck and a number of others visited England, France, Sweden, and Russia to make an analysis of training methods for teachers in vocational and technical schools. They brought home information not only about those four countries but new perspectives about the United States itself. If you have been abroad yourself—and most of you have, I suspect—you have your own perspectives about career education there and here that may or may not square with mine.

Gordon Swanson said last spring in the Georgia Journal of Reserach and Development in Education that there were some clear reasons for the differences between education in this country and education in Europe. Let me review some of the key ideas in his article:

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Vocational training in formal institutions is a particularly American phenomenon. During colonial times, the craft guilds provided vocational training. But by the time of the American Revolution, the craft guilds had faded considerably in this country, unlike their counterparts in Europe. In the century following the Revolution, the authority of the master bore an inverse relation to the creation of formal school programs to supply vocational education. As reliance on apprenticeship decreased, reliance on vocational schooling increased. In contrast, the authority of the master persisted in Europe.

The rise of the professions in the United States was greatly accelerated following passage of the Morrill Act in 1862. A highly developed sense of professionalism and specialization followed rather than preceded the opening of formal training programs. The master/apprentice relationship has further weakened in the United States during the past 100 years. It is relatively much stronger in Europe. Here, apprenticeship training programs constitute only a minor part of our manpower training. But in West Germany, for example, over 30 percent of workers in the trades are trained as apprentices.

The comprehensive high school, long a special feature of secondary education in the United States, is typically democratic and a place in which the relation between general education and vocational education can be better worked out than in the separate institutions still typical in Europe.

One aspect of vocational education in which Europe is clearly superior to the United States is in continuing adult education. Systematic arrangements for updating, upgrading, and retraining the current adult work force are an active experimental frontier in Europe, more so than in the United States.

European patterns of education have been transplanted throughout the world. Most of the North American, African, and Asian educational systems are European transplants dating from the great colonial empires of the European nations. These transplanted systems still show clear signs of their heritage. As you travel around the world and talk with educators from other countries, you will meet European patterns over and over again—sometimes in original form, sometimes with native modifications. Most of the educational systems that exist worldwide cannot be understood chiefly as an outgrowth of native philosophies, religious beliefs, and national traditions. They can be understood instead as the heritage of European colonial conquests and the transplanting of European models all over the earth.

Other nations have not modified their transplanted European systems as much as we have in the United States. One result is that other nations are more likely than ours to accomplish a significant proportion of vocational training outside formal school settings. As one consequence, the expansion of vocational education in underdeveloped countries will probably take place largely outside the schools.

Another result is the higher prestige that general education enjoys around the world, giving it prominence over vocational education. Elementary schools worldwide are devoted almost entirely to basic academic skills and secondary schools are devoted largely to the same purpose, partly because of this prestige difference.

> Vocational education tends to grow under two conditions: (1) industrialization and (2) retaining a large fraction of the population in secondary schools. Many countries have yet to experience those two conditions. When they do, vocational education will tend to be added as a supplement to the academic curriculum, operated in separate courses or in separate schools for secondary or post-secondary students.
>
> Very gradually over time, vocational education tends to move toward some kind of coupling with academic education. That kind of coupling is one clear objective of career education. But the movement is unsteady and there are often counter trends. For example, a UNESCO commission has pointed out that there is a tendency in teaching science around the world today (not so much in the United States at this particular time) to move science toward theory rather than toward technology. That is, science is being made academic rather than technical. Making science respectable rather than useful is an unfortunate trend in many underdeveloped countries. The educational vine is still growing from its European roots.

Swanson concludes from his own investigations that career education does not exist—not in the forms we are now experimenting with in the United States—on the continent of Europe. If you think of career education as a wedding of academic education and vocational education, Swanson's conclusion draws support from a study we examined during the UNESCO conference in Geneva. The report says, "The majority of the countries sharing in this study distinguish clearly between general education on the one hand and vocational and technical on the other. This is reflected in the administration and the organization of the two, responsibility for directing them being in different official agencies. In terms of school structures, the distinction may occur from the start of secondary education and sometimes even earlier." The study report does go on to say some encouraging things about the current trend in some countries, which, although they realize perfectly well that education made up of one part academic content and one part vocational training equals two separate parts, they are worried about the fact that one and one equals two. Some of them are moving—moving at the level of rhetoric, anyway, where most educational movements start and many stop—toward a realization that a split in the trunk of the educational tree may not be good for the students who have to climb it. The official handwringing in France, for example, includes this kind of talk: "Education can no longer be satisfied with introducing pupils and students to culture without concerning itself to preparing them for vocational functions. In the modern world the task of training has become predominant and if at every level of society work is becoming inseparable from a previous instruction, then formal education can not be isolated from the world of work. No child should leave the educational system without having received a valid vocational training and the content of the training should correspond better to the jobs offered by the economy."

That sentiment, relatively new among European spokesmen and relatively untested there, is not new and has been thoroughly tested here. Now it is being more rigorously tested through the career education movement. I say the sentiment that academic education and vocational education should be linked is not new here. Take this example:

> Both practically and philosophically, the key to the present educational situation lies in a gradual reconstruction of school materials and methods so as to utilize various forms of occupations typifying social callings, and to bring out their intellectual and moral content. . . . Only in this way can there be on the part of the educator and of the

> educated a genuine discovery of personal aptitudes so that the proper choice of a specialized pursuit in later life may be indicated.

John Dewey wrote that in Democracy and Education in 1916.

A half century later, thoughtful educators were still talking the same way about the relation between academic and vocational education. Take this example:

> A baccalaureate degree from our state universities and colleges should embrace now, as in the past, a dual approach: a foundation of liberal education and, based upon that, a specialized program enabling the student to fit himself into the economy or society in a practical way. (Glenn S. Dumke in "The Future of General Education in the California State University and Colleges," Office of the Chancellor, 1972.)

I chose Dumke as the educational spokesman because he runs one of the nation's largest college systems. We talk about comprehensive high schools. Dumke's system is just as comprehensive: 60 percent of the current bachelors' degrees and 85 percent of the current masters' degrees granted by its nineteen campuses are in occupational fields and are based on a wedding of academic and vocational education. Both the Dewey and Dumke quotations come from one of the most remarkable reports on career education I have ever read. It is brand new, published this month, and is titled Career Education: Proposals for the Seventies and Eighties. It is a report to Dumke as chancellor and was written by his Advisory Committee on Career Education, appointed last year. The report strongly advocates the view that career education is a worthy function for the nineteen campuses and is built around twenty-five plain-talking recommendations as to how the Chancellor's Office can make it happen. The report is a classic example of American operational thinking about the relation of academic and vocational education, this time in colleges and universities.

That report probably could not have been written in Europe or in any country whose educational system is rooted in Europe. (Our's is rooted in Europe too, but we have grafted new branches onto the original stock, as I explained.) Even if the report could have been written elsewhere, the actual operations that accompany it in the California state university and colleges are distinctly American.

I was surprised that the UNESCO International Conference dealt with educational innovation and career education—just those two—and those two in combination. At first it seemed to me like a scheduling conflict in the international calendar. Why should career education be magnified as the one innovation of worldwide interest? Why not other innovations? I couldn't get a clear answer at the conference but once I returned home, I began to see a pattern in our domestic movement that gave the answer. Career education in the United States is being represented as a general purpose reform movement in education. Since coming back, I have seen other innovations marching under the career education banner. I have seen changes in who teaches, what's taught, when it's taught, where it's taught, how it's taught, and even why it's taught—all in the name of career education.

Who teaches in career education? Workers are becoming supplementary teachers, either entering school classrooms or supervising students at work stations, in office, and factories.

Who's taught in career education? The concept that career education is a lifelong activity would expand the student population to include every adult worker, each one of which needs training for career progression.

What's taught as career education? Self-awareness, economic awareness, achievement motivation, values clarification, decision-making, and much more. Yesterday I saw a career education curriculum unit dealing with love.

When does career education occur? The movement is pushing education beyond the standard school day, school week, and school year—into the afternoons and evenings, into the weekends, and into the summers.

Where does career education occur? New programs are moving instruction out of the school building and into the work place.

How is career education taught? New forms of instruction are making students more active. There are more student-directed projects, more hands-on experiences.

Why is career education advocated? It gives schooling a purpose, makes education relevant to a highly significant area of life.

On the West Coast, yesterday, I came across two cases of school reform—one in a wealthy suburban high school and the other in a poor inner-city, general purpose high school. Both reforms were being made in the name of career education.

Why is this? Why should this particular innovation attract both suburbs and cities in our country and both developed and underdeveloped nations worldwide? What does career education have that television, flexible scheduling, the open classroom, the non-traditional university, and other innovations don't have? For one thing, career education can contain them all. It is bigger than any of them. For another, career education is a purpose as well as an activity, an end as well as a means.

All the other innovations are means towards some unspecified end. Think about that for a moment. Career education could become the end toward which all the other innovations are working. I can predict that now; all the other innovations will be used to accomplish career education. But the reverse cannot happen. That is, we would not say that career education should be used to accomplish the open classroom.

For another, career education has a public constituency outside the profession. Most other innovations do not. Understandably, the public cares more about the outcomes of education than about the techniques. My own organization has studied attitudes toward career education among some 30,000 parents, students, and teachers in the six cities associated with the Career Education Model I program headquartered here at CVE. Their attitudes are extremely positive and there is widespread agreement among parents, students, and teachers about the ends as well as the means of career education.

For another, it is very broad—perhaps limitless. If work is defined as any productive activity, then education for work is education for almost everything. If career is defined as a lifelong succession of activities—not only as a worker but also as a citizen, a family member, a leisured person, and so on—then career education is education for every life role. If the three r's and a broad knowledge of the arts and sciences are universal vocational skills and are knowledge that no career change can ever make obsolete, then career education encompasses academic education.

Now it is clear why career education is singled out for international attention as the primary innovation in education today. Seen from an international perspective, career education can be understood as a general purpose reform movement with the power to change everything about the schools, to give them a clear purpose, and to win public support.

I said earlier that travel can give you new perspectives on your own country. From 5,000 miles away, you can easily see a full century of your own history. You can sit in a committee room overlooking Lake Geneva and explain to an international committee how the land grant colleges were conceived in the 1860's as one way of reforming higher education by combining vocational and academic concerns. You can explain how, fifty years later in the 1910's, John Dewey experimented in Chicago with a new form of secondary education that combined vocational and academic concerns. You can explain how progressive education in the 1930's tried to get elementary schools to teach how basic academic skills are used in the world of work. You can explain how career education in the 1970's is a direct continuation of our century-long general purpose reform movement in education. It is a particularly American reform, in that it would give every citizen the twin benefits of intellectual and practical training, producing citizens who not only know something but can also do something.

Actually, you can date our reform movement from an earlier time if you like. Benjamin Franklin's Academy in Philadelphia, which offered a combination of the academic and the practical, will do as a starting point. And you can bring it right up to today by referring to the Third Environment paper which HEW Secretary Weinberger has issued as official policy concerning the relation of education and work. If you think about the people in the upper reaches of HEW who have long thought that the school establishment needs a major overhaul, then you will understand the Third Environment paper as a new page in the history of educational reform.

Career education in the elementary schools is largely a United States phenomenon. Elementary schools around the world teach basic academic skills. Just to do that much for all children is still a dream in many countries. The number of children aged five-fourteen who have no schools to attend is going up, thanks to worldwide population growth. By 1980, only six years from now, the number will stand at 230,000,000. About twenty-five years ago, the world adult illiteracy rate was 45 percent. Today it is all the way down to 33 percent. No wonder elementary schools around the world concentrate on basic academic skills. Elementary schools in other nations do study the community and community helpers, and community workers. But depending on the nation and its particular traditions, those schools may or may not emphasize the work ethic.

Career awareness is a widely held objective of career education in the United States. You have to travel to appreciate how distinctly American that objective is. For a free society like our's, awareness is worth having because there are choices. In many other countries the choices are so limited by the proclaimed needs of the national government, or by socioeconomic stratifications that predetermine career opportunities, or by the geographic isolation or immobility of the population, or by the lack of training programs that career awareness is not an urgent objective for them in the way that it is for us, given our freedom, social and geographic mobility, and the accessibility of training. Indeed, career awareness becomes an even more urgent objective for our own minority populations as we integrate schools and take affirmative action to remove the remaining social, economic barriers to their upward mobility.

One of the career education cliches in our elementary schools is the use of trips and speakers. The few countries that tried career education in their elementary schools are more likely to take students on trips and bring in speakers than anything else. Evidently, teachers around the world agree about that.

The cutting edge of career education in this country appears to be the bottom edge. That is, we are extending career concerns downward to the kindergarten. Elsewhere in the world, the cutting edge appears to be at the top edge. That is, they are extending career concerns upward throughout the adult years. Actually, we are making upward extensions as well. The fact that over half the students in our colleges and universities are part-time today is a statistical reflection of the fact that adult workers are returning to school in increasing numbers.

Earlier, I mentioned Gordon Swanson's observation that vocational training in formal educational institutions is a particularly American phenomenon. Elsewhere it tends to be conducted by employers, by unions, or by special government-financed institutes. For example, German industry handles about 90 percent of all the training for industrial employment. Japanese companies have participated in vocational training since before 1900. Currently, Japanese companies run over 400 government-subsidized industrial training centers, plus financing an enormous number of programs with their own money. Of course, we have our parallels here in the manpower training programs conducted by the Department of Labor outside the regular schools. And it has been estimated that our companies spend perhaps 30 percent as much on training as the government on all of public education. Even so, school-sponsored vocational training is more common here than elsewhere.

One reason for this is the fact that schools in the United States are more easily penetrated by social forces than schools in other countries, thanks in part to the decentralized pattern of local public school districts and the relatively decentralized governance of public colleges and universities. Education in the United States is a direct instrument of social policy, with a tradition of governance by laymen that makes the schools more responsive to social needs, more reachable from the outside, more likely to innovate. And education is looked upon in the United States as having utilitarian purposes as being both intended to solve and capable of solving all manner of social problems. We use the schools to bring about racial desegregation as well as to assimilate new minority groups into the language and culture of the larger society. Career education is clearly in line with the expectations we hold for our schools. Clearly, it brings the concerns of the outside world directly into the school program. It is typically American to take such problems as the need for early career orientation and for lifelong career retraining and ask the schools to solve them.

The concept of schools as work places and work places as schools excites imaginations around the world. The idea has no ideological home and no nationality. Last summer when Ken Hoyt convened a number of philosophers of education and wise social commentators in Washington to discuss career education, they championed the idea of schools as work places and work places as schools. James Coleman of Johns Hopkins University has done the same thing, suggesting that students should not be segregated from the working society. Three years ago the leaders of another country said that education and productive work should be completely integrated and that students should cease to form a distinct social category. That statement could have come from James Coleman, but it came instead from the Peoples' Republic of China in a major policy study on education. The UNESCO report we considered in Geneva said that henceforth the school will be less and less in a position to claim the education function as its special prerogative.

Last night on my flight from Los Angeles, my seatmate introduced himself after seeing me reading a paper on career education. I told him I would be speaking here this morning on the topic. He said, "Let me help you. I can tell you all about career education. I have the best program in the country. In four years we have produced 2,000 graduates. We have boys and girls from all ethnic groups and from all economic groups. We give formal instruction and we give on-the-job training. We are tremendously successful. Come to see our program the next time you are in Los Angeles." He went on and on. He sounded like the principal of a vocational high school. But he wasn't. Instead he was the director of a special education project at Rockwell International. What he was describing was the vocational training offered to high school students at Rockwell International in cooperation with local public schools. The program is evidence toward the prediction of the UNESCO report. Henceforth the school will be less and less able to claim the education function as its special prerogative.

Much of the rest of the world is beginning to struggle with a problem that we here in the United States associate with a traditional academic senior high school program. Listen to this quotation from the UNESCO report we discussed in Geneva: ". . . sitting at a school bench instructed by a teacher who had never experienced any other profession or way of life, following a curriculum which may faithfully portray the values of a thousand years ago, taking examinations that were primarily designed to eliminate but a chosen few, aiming at a career for which 90 percent of the pupils may be ill endowed and which they will never follow. All of this and worse is not good education. Indeed, for some it is not education; it is imprisonment." That statement is a world view of what secondary education is like today and what is wrong with it. The world searches for alternatives to the traditional school bench. The substitutions include polytechnical education in Russia, village polytechnics in Kenya, factory schools in Yugoslavia, and part-time sandwich courses in Great Britain. The trends include adding specific vocational training to general academic education so that the student can find immediate employment and take his natural place in adult life when he graduates.

The same UNESCO report urges that schooling be more closely related to the world of work. It says, "Perhaps the most far-reaching implication of the concept of lifelong education is a new relationship between work and education. No longer should they oppose or exclude each other." That quotation should sound very familiar to us here in the United States. It sounds like something drawn from the current literature of career education. There is much more in the report to indicate that our domestic movement is being paralleled—at least at the level of rhetoric—by what is being said around the world. Consider these recommendations from the report: ". . . Education and work should be closely associated . . . Technology should be ever present in the educational process, both as to content and as to the guiding method . . . Technological courses which are unnecessarily expensive should be supplemented or replaced by out-of-school training . . . The gap must be bridged between educational establishments and business companies, a gap that is too large in most countries . . . The companies should take over a great deal of training, such as specialized instruction to improve workers' qualifications, courses for promotion, and training for professional executives . . . The companies should put more and more of their profits into training."

Do you remember the late 1960's in France? Workers and students rioted together, both demanding better opportunities. The French government met the workers' demands first. In 1971 it passed new legislation providing French workers—all 25 million of them—a right to education and training. Under the law, the government and employers combine funds to pay stipends for workers during their training period. Employers were required to contribute 1 percent of their payrolls to finance the training. Interestingly, the employers chose to contribute 2 percent although the law does not require that higher rate until 1976. Since the French government matches employers' training funds the amount being spent equals 4 percent of the entire national payroll. In 1972, the first year following the law, 7½ percent of the entire work force was engaged in training. The plan includes having skilled workers take time off from work to train others in their specialty. That may be an idea for us during full employment—whenever that returns—when it is difficult to recruit teachers for highly technical subjects.

You can summarize a great deal of what is happening around the world with the following statement: "Students are demanding work; workers are demanding study." It seems that the grass is always greener on the other side of the fence. The twin demands—work as an experience for students and study as an experience for workers are being heard around the world. Do not be surprised if union leaders in our country begin to negotiate further education and training into union contracts as a new fringe benefit. It is happening already—and not only among teachers' unions. Much of the great rise in part-time higher education in the United States comes from adults taking work-related courses. What about the willingness of employers to cooperate in career education? Around the world, their attitude seems to be generally as favorable as in France, where they voluntarily doubled the required contribution to worker training. In Washington last summer, Ken Hoyt invited over 200 career education project directors from across the country to assemble in Washington. My organization was responsible for profiling the projects. We asked them, among other things, what kinds of trouble they were having with getting employers to cooperate. They said, "None." None in tiny school districts, and none in great cities. We found no cases of tension or conflict between schools and employers in any of the projects.

The attitudes of labor unions toward career education is not so clear. At the UNESCO conference we learned that in some African rural areas the local blacksmiths and the fishermen strongly resisted helping the schools set up training programs in their specialities. Those tribesmen insisted that the secrets of their trades should not be revealed to the young outside of tribal initiation rituals. The old craftsmen wanted to save those secrets for the initiation rites they controlled and to pass them on to a selected few—perhaps to the members of their own families. You can recognize some parallels in our own country.

Labor unions seem to differ in their attitudes toward career education depending on whether they are seeking new members. When I met with the central labor council in a large city recently to discuss the members' attitudes toward career education, I found the head of the operating engineers, (the men who run the heavy bulldozers and the big cranes) say something like this: "We had to turn down 800 applicants last year for the training program that the union sponsors. If the schools do anything to stimulate interest or offer training in our field, it will only increase unnecessary applications and make more trouble." But the head of a white-collar department store union talked differently. He said something like this: "The department stores are hiring more and more part-time workers for short shifts, nights, and weekends. This is cutting down on full-time workers and of course cutting down on union membership. We're interested in cooperating with the schools to run training programs that might get kids interested in retail sales as a full-time career."

In short, while the attitudes of employers seem to be consistently positive, the attitudes of labor unions appear to be mixed, depending on the circumstances each one faces in the labor market.

Will vocational education gain first class citizenship in the years ahead? I wondered about that as I met in Geneva with educators from ninety-two countries. We can certainly say that interest in vocational education is becoming as strong in other countries as it is here, although they are less likely to keep it inside the schoolhouse. And respect for vocational education seems to be rising—slowly but surely—around the world. As other countries educate increasing proportions of their population, they become interested in making education useful. I quoted Gordon Swanson earlier to the effect that vocational education grows under the two conditions of industrialization and educating a higher proportion of the population. Virtually every country lacking these two conditions is moving toward them, albeit very slowly in some cases. That trend makes the vocational educator increasingly valued.

Developing countries absolutely require a vocationally trained work force for progress. Even in developed countries, a widespread concern about competition in world markets and a growing concern about inflation and about higher worker productivity as a means of combating it drives the demand for more and better vocational education.

In our own country, the career education movement itself will tend to bring vocational education and academic education into new relationships that will move vocational educators to a distinctly higher status, in my opinion.

Let me close with a story I am sure Bill Pierce would want me to tell you. Bill asked my organization to prepare an exhibit of career education materials from all over the United States to take to Geneva. Many of you here supplied excellent examples from your own states. UNESCO officials wanted us to bring audiovisual materials to show other countries so we took filmstrips and slide/tapes and movies. We also took projectors along so that we could show the materials continuously for ten days in a special exhibit room during the conference.

The materials attracted much attention—and so did the equipment—one day a delegate from one of the Arab countries—a country that will remain nameless—told me he wanted to buy one of the television-sized slide/tape projectors we had brought along to show the materials. He said he might want several of them. I quoted the list price of the U.S. manufacturer as $350.00 per machine. He asked if we would let him have a discount.

Knowing that I was dealing in a sensitive area of international relations, I took the question immediately to Bill Pierce. I said, "Bill, this man is second-in-command in his ministry of education. Should we give him a discount in the name of international goodwill?"

Bill thought it over for a couple of minutes, then said, "How much of a discount does he want?" I went back to the Arab delegate, feeling by this time something like Henry Kissinger using shuttle diplomacy between the two parties.

The Arab delegate, when I asked him what kind of discount he had in mind, said, "I do not think our two great countries should quarrel over the price. Why don't you simply give us the machine at no charge?"

I went back to Bill and made the counterproposal but Bill could smell a sale coming up and he insisted that we simply stick to the list price. And so that's what we did. We did not arrange a discount. We insisted on the full amount.

Now, I am not an international economist and so I am not qualified to say that the price of Arabian oil went up as a direct result of our little transaction in Geneva alone. But the next time you hear Bill Pierce is going abroad, you might send him a little note about how to negotiate.

Appendix

Exhibit A

SEMINAR AGENDA

improving
vocational curricula
in local
education agencies

7th
annual
national leadership
development seminar
for state directors
of vocational education

columbus
ohio

september 24/26
1974

THE CENTER FOR VOCATIONAL EDUCATION
The Ohio State University · 1960 Kenny Road · Columbus, Ohio 43210

STATE DIRECTORS PLANNING COMMITTEE

Clarence Burdette, West Virginia
James L. Reid, Maryland
Paul Schalles, Pennsylvania
John E. Snyder, Kansas
Francis T. Tuttle, Oklahoma
Darrell L. Ward, Oregon

CENTER STAFF

Dallas G. Ator, associate director
Daniel E. Koble, Jr., project director
James G. Bumstead, research associate
Nancy J. Lares, secretary

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Grant and Administered through the
Vocational Education Personnel Development
Division, BOAE/USOE.

IMPROVING VOCATIONAL CURRICULA IN LOCAL EDUCATION AGENCIES

SEMINAR PURPOSE

To provide an opportunity for the professional development and self-improvement of State Directors of Vocational Education and key members of their staffs in the area of curriculum activities. To provide seminar participants an opportunity to exchange ideas with each other and discuss common vocational education concerns.

SEMINAR PROBLEM

State Directors of Vocational Education and their staffs are called upon and expected to give leadership to programs of curriculum development. It is important that they be knowledgeable about the processes and innovative concepts related to the implementation, maintenance and improvement of instructional programs. It is necessary that guidelines and information papers be developed which explain and define methods that state vocational education personnel can utilize in discharging curriculum responsibilities.

SEMINAR OBJECTIVES

The seminar will increase the knowledge and awareness of participants in the curriculum development areas of:

A. Vocational Education Programs for Persons with Special Needs

  1. Handicapped
  2. Disadvantaged
  3. Institutionalized (correction, drug offenders, etc.)

B. State Level Programs to Facilitate the Dissemination and Implementation of New Curriculum Ideas

  1. Use of EPDA Sections 552-553 funds
  2. Use of State Curriculum Centers
  3. Use of Simulation and Role Playing for Curriculum Modification
  4. Supervisory Programs for Curriculum Improvement

C. Implementing Programs of Orientation and Exploratory Career Education Activities (pre-vocational activities)

1. Defining Pre-Vocational Activities
2. Legislative Programs to Support Pre-Vocational Programs
3. Planning Programs of Orientation and Exploratory Career Education
4. Implementing and Monitoring Pre-Vocational Programs

D. Using the Output from Management Information Systems for Curriculum Improvement and Related Activities

1. Unique State Management Information Systems
2. Center Management Information System
3. Project Baseline

E. The Role of the State Vocational Education Agency in Improving Curricula in Local Educational Agencies

MONDAY SEPTEMBER 23, 1974

REGISTRATION

7:00 p.m.
8:30 p.m. Lobby

TUESDAY SEPTEMBER 24, 1974

REGISTRATION

8:00 a.m.
9:30 a.m. Lobby

FIRST GENERAL SESSION

9:30 a.m. General Custer/
General Sheridan

PRESIDER

Luther Hardin, Associate Director for Vocational, Technical, and Adult Education, Arkansas

OPENING REMARKS

WELCOME TO OHIO - THE BUCKEYE STATE

Franklin B. Walter, Deputy Superintendent of Public Instruction, Ohio

Byrl R. Shoemaker, State Director of Vocational Education, Ohio

GREETINGS FROM THE CENTER

Robert E. Taylor, Director, The Center for Vocational Education

10:15 a.m. *ADAPTING VOCATIONAL EDUCATION CURRICULA TO MEET THE NEEDS OF A CHANGING SOCIETY*

Lane Murray, Superintendent, Windham School District, Texas Department of Corrections

11:15 a.m. DISCUSSION

11:30 a.m. LUNCH (Individually arranged)

TUESDAY SEPTEMBER 24, 1974

SECOND GENERAL SESSION

1:00 p.m. General Custer/ General Sheridan

PRESIDER

Stephen Poliacik, State Director of Vocational Education, New Jersey

INTRODUCTIONS

Joel Magisos, Associate Director for Information and Field Services, The Center for Vocational Education

BASES AND MECHANISMS FOR CURRICULUM DEVELOPMENT

PRESENTER

Elizabeth Simpson, Director of the Curriculum Center for Occupational and Adult Education, USOE

2:00 p.m. SEMINAR GROUPS

Meetings of participants with their respective curriculum management center directors, The National Network for Curriculum Coordination (See Appendix for state assignments)

3:15 p.m. COFFEE BREAK George Rogers Clark Room

3:30 p.m. CONTINUE SEMINAR GROUPS

4:15 p.m. ADJOURNMENT

4:30 p.m. MEETING OF THE NATIONAL ASSOCIATION OF STATE DIRECTORS OF VOCATIONAL EDUCATION

7:00 p.m.
9:30 p.m. Special tours of the Instructional Materials Laboratory for Trade and Industrial Education, The Ohio Distributive Education Materials Laboratory and the Ohio Agricultural Education Curriculum Materials Service on the campus of The Ohio State University have been arranged for those who wish to visit these curriculum resource facilities. An opportunity will be given when registering to sign up for transportation to these various sites.

WEDNESDAY SEPTEMBER 25, 1974

THIRD GENERAL SESSION

9:00 a.m. General Custer/ General Sheridan

PRESIDER

T. Dean Witmer, Chief, Development Division of Vocational Education Bureau, Pennsylvania

STATE SHOWCASE

USING THE OUTPUT GENERATED BY MANAGEMENT INFORMATION SYSTEMS IN COLORADO, WASHINGTON AND OKLAHOMA FOR CURRICULUM IMPROVEMENT

PRESENTERS

William D. Woolf, Supervisor of Management Information Systems, Colorado

Arthur A. Binnie, State Director, Coordinating Council for Occupational Education, Washington

Francis T. Tuttle, State Director of Vocational Education, Oklahoma

10:30 a.m. COFFEE BREAK George Rogers Clark Room

11:00 a.m. STATE SHOWCASE General Custer/ General Sheridan

VOCATIONAL EDUCATION PROGRAMS TO MEET THE SPECIAL NEEDS OF PERSONS IN MICHIGAN AND FLORIDA

PRESENTERS

Addison Hobbs, State Director of Vocational Education and Career Development Services, Michigan

Joe Mills, State Director of Vocational, Technical and Adult Education, Florida

12:00 noon LUNCH (Individually arranged)

WEDNESDAY SEPTEMBER 25, 1974

FOURTH GENERAL SESSION

1:30 p.m. General Custer/
General Sheridan

PRESIDER

James L. Reid, State Director of Vocational-
Technical Education, Maryland

STATE OF THE ART REPORT

AN INDUSTRIAL APPROACH TO CURRICULUM DEVELOPMENT AND IMPLEMENTATION

PRESENTER

John P. Cicero, Education Research and Development Manager,
Instructor Training Xerox Corporation

2:30 p.m. *CURRICULA FOR PREPARING STATE PERSONNEL DEVELOPMENT SUPERVISORS*

PRESENTER

Robert U. Coker, Research Coordinating Unit for
Vocational Education, Tennessee

3:00 p.m. COFFEE BREAK George Rogers
Clark Room

3:15 p.m. STATE SHOWCASE General Custer/
General Sheridan

PROGRAMS OF PERSONNEL DEVELOPMENT TO FACILITATE THE DISSEMINATION AND IMPLEMENTATION OF NEW CURRICULUM IDEAS IN THE STATES OF WEST VIRGINIA, INDIANA, AND OREGON

PRESENTERS

Clarence Burdette, Assistant Superintendent for Vocational-
Technical and Adult Education, West Virginia

Don K. Gentry, State Director of Vocational and Technical
Education, Indiana

Monty E. Multanen, Director, Career and Vocational Education,
Oregon

4:15 p.m. ADJOURNMENT

WEDNESDAY SEPTEMBER 25, 1974

6:00 p.m. HOSPITALITY HOUR George Rogers Clark Room

SPONSORED BY BRODHEAD-GARRETT COMPANY, Cleveland, Ohio

HOST, Tom Rogers, Educational Consultant

7:00 p.m. DINNER General Sherman

TOASTMASTER

Calvin Dellefield, Executive Director, The National Advisory Council on Vocational Education

PROCEDURES FOR IMPLEMENTING CURRICULUM CHANGES IN LOCAL EDUCATIONAL AGENCIES

PRESENTER

Ralph W. Tyler, Consultant on Curriculum, Science Research Associates, Chicago

THURSDAY SEPTEMBER 26, 1974

SPECIAL EVENT

8:00 a.m. BREAKFAST General Sherman

EYE-OPENER

Roy D. Irons, State Director of Vocational Education, Idaho

AVA REPORT

STATUS OF FEDERAL LEGISLATION AFFECTING VOCATIONAL EDUCATION

PRESENTER

Lowell A. Burkett, Executive Director, American Vocational Association

THURSDAY SEPTEMBER 26, 1974

FIFTH GENERAL SESSION

9:30 a.m. General Custer/
General Sheridan

PRESIDER

Shelby Price, Deputy Director, The Center for Vocational Education

STATE OF THE ART REPORT

INTERNATIONAL PERSPECTIVES ON CAREER EDUCATION

PRESENTER

Henry M. Brickell, Consultant, New York

10:30 a.m. DISCUSSION

10:45 a.m. COFFEE BREAK George Rogers
Clark Room

11:00 a.m. STATE OF THE ART REPORT General Custer/
General Sheridan

THE ROLE OF THE STATE VOCATIONAL EDUCATION AGENCY IN CURRICULUM IMPROVEMENT FOR LOCAL EDUCATIONAL AGENCIES

PRESENTER

Nevin R. Frantz, Associate Professor of Occupational Teacher Education, University of Delaware

12:00 noon LUNCH (Individually arranged)

THURSDAY SEPTEMBER 26, 1974

SIXTH GENERAL SESSION

1:15 p.m. General Custer/
General Sheridan

PRESIDER

Dallas G. Ator, Associate Director of Special Projects,
The Center for Vocational Education

USOE REPORT

LEADERSHIP RESPONSIBILITIES FOR VOCATIONAL EDUCATION IN CAREER EDUCATION: A NEW LOOK

PRESENTER

Kenneth Hoyt, Associate Commissioner, Office of
Career Education, USOE

3:00 p.m. *THE PLACE OF VOCATIONAL EDUCATION PREPARATION IN CAREER EDUCATION*

PRESENTER

Albert J. Riendeau, Chief, Post-Secondary and Adult
Occupational Programs Branch, Division of Vocational-
Technical Education, USOE

4:00 p.m. ADJOURNMENT

FRIDAY SEPTEMBER 27, 1974

8:30 a.m.
11:30 a.m. Participants who wish to visit The Center for Vocational Education for the purpose of touring the operation or reviewing specific research projects may make arrangements to do so during this half day session.

Exhibit B

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